



Graduate Catalog
Fall 2005 - Spring 2007
University of Nevada, Las Vegas



A Message from the President

UNLV's strategic plan states that graduate education will play an increasingly crucial role in the growth and development of the university. While it continues to be "student-centered" in all aspects of education, UNLV has worked to develop graduate and advanced professional programs that meet local, state, or regional needs or that move the institution toward its goal of becoming a nationally recognized research university. The Carnegie Institution affirmed the institution's successful research efforts when it ranked UNLV as a Doctoral Research-Intensive institution; we hope to achieve the highest level, Doctoral Research-Extensive, by 2010. Toward this end, we have added many new master's and doctoral programs in recent years in education, hotel administration, business, psychology, geoscience, and anthropology, as well as professional areas like dentistry, law, physical therapy, and architecture. Other new and innovative programs will be created in the coming years.

UNLV currently offers more than 100 graduate programs ranging from environmental science to screenwriting and from art to biochemistry. With more than 5,500 students enrolled in our graduate programs, the university has the largest enrollment of post-baccalaureate students in the State of Nevada, and the number continues rapidly to grow. Moreover, the excellent quality of our programs and students continues to increase. In assessing our programs, employers tell us that our graduates are well prepared to enter the job market with excellent skills.

You will find UNLV is a vibrant and exciting university with a limitless future. It is large enough to offer the vast array of programs students need and want, yet it is small enough that students can develop personal relationships with faculty members in ways that are not always possible at larger institutions. I can assure you that the education you will receive at UNLV is second to none, and I hope you will consider joining our family of graduate and professional students.

Sincerely,

A handwritten signature in cursive script that reads "Carol C. Harter".

Carol C. Harter
President

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Degree Programs

Accountancy M.S.
Anthropology M.A.; Ph.D.
Architecture M. Arch.
Aerospace Engineering M.S.
Art M.F.A.
Biochemistry M.S.
Biological Sciences M.S.; Ph.D.
Biomedical Engineering M.S.
Business Administration M.B.A., Executive M.B.A.
Business Administration/Dental Medicine Dual
M.B.A./D.D.M
Business Administration/Hotel Administration Dual
M.B.A./M.S.
Hotel Administration/Law Dual M.B.A./J/D.
Chemistry M.S.; Ph.D.
Civil & Environmental Engineering M.S.; Ph.D.
Communication Studies M.A.
Computer Science M.S.; Ph.D.
Construction Management M.S.
Counseling M.S.
Creative Writing M.F.A.
Criminal Justice M.A.
Crisis and Emergency Management M.S.
Curriculum & Instruction M.Ed.; M.S.; Ed.S.; Ed.D.;
Ph.D.
Economics M.A.
Educational Leadership M.Ed.; M.S.; Ed.S.; Ed.D.;
Executive Ed.D.; Ph.D.
Educational Psychology M.Ed.; M.S., Ed.S., Ph.D.
Electrical & Computer Engineering M.S.; Ph.D.
English M.A.; Ph.D.
Environmental Science M.S.; Ph.D.
Ethics & Policy Studies M.A.
Exercise Physiology M.S.
Film - Screenwriting M.F.A.
Foreign Languages M.A.
Geoscience M.S.; Ph.D.
Health Physics M.S.
Health Promotion M.Ed.
History M.A.; Ph.D.
Hospitality Administration M.H.A.; Ph.D.
Hotel Administration M.S.

Journalism and Media Studies M.A.
Kinesiology M.S.
Learning and Technology Ph.D.
Management Information Systems M.S.
Materials and Nuclear Engineering M.S.
Mathematical Sciences M.S., Ph.D.
Mechanical Engineering M.S.; Ph.D.
Music M.M.
Musical Arts D.M.A.
Nursing M.S.N., Ph.D.
Physical Therapy D.P.T.
Physics M.S.; Ph.D.
Political Science M.A.
Psychology Ph.D.
Public Administration M.P.A.
Public Affairs Ph.D.
Public Health M.P.H.
Radiology Ph.D.
Science M.A.S.
Social Work M.S.W.
Sociology M.A., Ph.D.
Sociology M.A.; Ph.D.
Special Education M.Ed.; M.S.; Ed.S.; Ed.D; Ph.D.
Sport & Leisure Service Management - Physical
Educations, M.Ed. & M.S., Ph.D.M.S.
Teacher Education Ph.D.
Theatre Arts M.A.; M.F.A.
Transportation M.S.
Water Resources Management M.S.

Graduate Certificate Programs and Departments

Addiction Studies (Counseling)
Family Nurse Practitioner (Nursing)
Food and Beverage Management (Hotel
Administration)
Forensic Social Work
Marriage and Family Therapy (Counseling)
Nursing Education (Nursing)
Public Management (Public Administration)
Rehabilitation Counseling (Counseling)
Spanish Translation (Foreign Languages)
Women's Studies (Women's Studies)

UNLV Student Directory Information

In accordance with the University of Nevada, Las Vegas policy and the U.S. Family Education Rights and Privacy Act of 1974 (FERPA), UNLV vigorously protects the privacy of student education records. UNLV does not release private records of individual students, such as grades and class schedules, without prior written consent of the student.

As permitted under federal law, the sole exception to the above practice is the release of “directory” information considered to be public in nature and not generally deemed to be an invasion of privacy. At UNLV, the following categories are defined as “directory” information: Name, address, e-mail address, telephone number, dates of attendance, full-time/part-time status, academic major, college and grade level, heights and weights of members of athletic teams, academic honors, other academic institutions recently attended, participation in UNLV organizations, and degrees earned and dates attended.

UNLV uses directory information for non-commercial, educational purposes, such as to mail notices to students about changes in policies, services, or opportunities. Directory information may also be provided for commercial purposes to UNLV affiliates, honors societies, the alumni association and foundation, or other individuals for purposes that may be beneficial to students. UNLV exercises discretion in responding to requests for directory information and may or may not provide such information when requested, depending on the intended purpose of the request. UNLV does not sell or rent student information for a fee.

You have the right to request that UNLV not release directory information about you for commercial and/or non-commercial purposes.

WARNING: It is important to consider carefully the potential consequences of restricting the release of directory information. For example, if you restrict release for non-commercial educational purposes, UNLV will be unable to place your name in publications such as honors and graduation programs; to confirm graduation and dates of attendance to potential employers; to verify enrollment with organizations such as insurance companies; or to send notifications about specialized scholarships.

If, after due consideration, you wish to restrict the release of directory information, please print this form and check one of the boxes below indicating your authorization.

- Remove my name from directory information for commercial purposes. Commercial purposes would include such organizations that provide health insurance, tuition payment plans, invitations to join academic organizations, or the alumni association. The organizations provide students with information, services and benefits.
- Remove my name from directory information for non-commercial purposes. Non-commercial purposes would include such purposes as publications in honors and graduation programs, verification of enrollment for health insurance, degree verification for employment, invitations to apply for specialized scholarships, or invitations to attend specialized activities or workshops.
- Remove my name from directory information for both commercial and non-commercial purposes.
- I previously asked to remove my directory information for one of the purposes listed above, and now wish to allow release of my directory information.

Signature

Print Name

Student ID

Date

This authorization can be mailed, faxed, or delivered in person to Student Enrollment Services, by the deadline stated in the academic calendar. This directive will apply permanently to your record, even following graduation, until you choose to reverse it by submitting a written authorization to Student Enrollment Services.

4505 Maryland Parkway • Box 451029
Las Vegas, Nevada 89154-1029
Fax: (702) 895-1118

Academic Calendar

FALL SEMESTER 2005

August	29	Instruction and late registration begins.
September	2	Final date for late registration, course additions, changes, or fee payment (with late penalty). None of these will be accepted after September 2.
	5	Labor Day recess.
	16	Final date to submit an application for December graduation without a late penalty fee.
	30	Last date to submit an application for December graduation with a late penalty.
October	3	Final date to submit a written request for non-disclosure of directory information.
	14	Mid-semester.
	28	Nevada Day recess.
November	4	Final date to drop or withdraw from classes, except short courses (see course listings on the web).
	11	Veterans Day recess.
	18	Last date to take comprehensive/ Final examinations, or defend a thesis or dissertation for December graduation.
	24-27	Thanksgiving Day recess.
	28	Last date to submit examination and oral defense results to the Graduate College for December graduation
December	5-10	Study Week.
	10	Instruction ends.
	12-17	Final examinations.
	17	Semester ends.
	19	December Commencement.

SPRING SEMESTER 2006

January	16	Martin Luther King holiday.
	17	Instruction and late registration begin
	23	Final date for late registration, course additions, changes, or fee payment (with late penalty). None of these will be accepted after January 28.
February	4	Final date to submit an application for May graduation without a late penalty fee.
	20	Presidents Day Recess.
	25	Final date to submit a written request for non-disclosure of directory information.
		Final date to submit an application for May graduation with a late penalty fee.
March	10	Mid-semester.
	12-18	Spring Break.
	24	Final date to drop a course or withdraw from classes, except short courses (see course listing on web).
April	14	Last date to take comprehensive/ Final examinations, or defend a thesis or dissertation for May graduation.
	22	Last date to submit examination and oral defense results to the Graduate College for May graduation
May	1-6	Study Week.
	6	Instruction ends.
	8-13	Final examinations.
	13	Semester ends.
	13	May Commencement.

SUMMER SESSION 2006 I

May 15 Instruction begins.
June 2 Instruction ends.

SUMMER SESSION 2006 II

June 5 Instruction begins.
July 4 Independence Day Recess.
7 Instruction Ends.

SUMMER SESSION 2006 III

July 10 Instruction begins.
August 11 Instruction ends.

FALL 2006

August 28 Instruction begins.
September 4 Labor Day recess.
October 27 Nevada Day recess.
November 10 Veterans Day recess.
23-26 Thanksgiving recess.
December 4-8 Study Week.
9 Instruction ends.
11-16 Final examinations.
16 Semester ends.
Commencement. - to be announced

SPRING 2007

January 15 Martin Luther King Day
16 Instruction begins.
February 19 President's Day recess.
March 9 Mid-semester.
11-17 Spring Break.
April 30 Study Week begins.
May 4 Study Week ends.
12 Semester ends.
Commencement – to be announced.

SUMMER 2007 I

May 14 Instruction begins.
June 1 Instruction ends.

SUMMER 2007 II

June 4 Instruction begins.
July 4 Independent Day recess.
July 6 Instruction ends.

SUMMER 2007 III

July 9 Instruction begins
August 10 Instruction ends.

***Dates are subject to change**

Introduction



“It is the role of graduate education to explore and advance the limits of knowledge and to define the state of the art in every field. Its purpose is to serve society’s needs in specific technical and professional ways, but also to serve the need for intellectual expansion. Graduate education is a major source of future intellectual leaders of society, and thus an integral and necessary part of our educational system.” This guiding mission for graduate education as defined by the Council of Graduate Schools is consistent with the goals, services, policies, and procedures of the UNLV Graduate College as well as the degree programs described in this *Graduate Catalog*. The Graduate College is currently responsible for oversight of 100 graduate programs (including 32 doctoral programs) and more than 5,500 graduate students. Whether it be in the areas of graduate curriculum, new graduate degree program evaluation, graduate student funding, graduate faculty and graduate student concerns, the Graduate College manages these issues through the working relationship of the Graduate Dean, Graduate College Staff, University Administration, Graduate Student Association, and the faculty committees of the Graduate Council. This management strategy aims to ensure and promote student opportunities for scholarship of the highest quality in all aspects of graduate education at UNLV.

*Paul W. Ferguson, Ph.D.
Vice President for Research
and Graduate Studies*

The Mission of the University of Nevada, Las Vegas

The University of Nevada, Las Vegas, located in the vibrant and dynamic city of Las Vegas and surrounded by the Mojave Desert, is emerging as a premier urban university. UNLV’s development embraces the traditional values of higher education adapted for the global community of the twenty-first century. The university increasingly will concentrate its resources on programs that are student centered, demonstrably excellent, and responsive to the needs of the local and regional community. UNLV promotes an environment that encourages the full personal and professional development of those it serves and of those who serve the university. UNLV assists students in meeting the intellectual and ethical challenges of responsible citizenship and a full and productive life through opportunities to acquire the knowledge and common experiences that enhance critical thinking, leadership skills, aesthetic sensitivity, and social integrity. The university provides traditional and professional academic programs for a diverse student body and encourages innovative and interdisciplinary approaches to teaching, learning, and scholarship. Recognizing the individuality of each student, UNLV simultaneously engenders collegial relationships and a sense of community among its members. UNLV embraces the interdependence of quality instruction, scholarly pursuits, and substantive involvements in campus and community life. The university offers artistic, cultural, and technical resources and opportunities to the broadest possible community. It promotes research programs and creative activities by students and faculty that respond to the needs of an urban community in a desert environment. UNLV is committed to developing a synergy between professional and liberal studies, between undergraduate education and graduate programs, and between superior teaching and meaningful research. UNLV increasingly is a dynamic resource for, and partner with, the community that it serves.

The Mission of the UNLV Graduate College

The Graduate College strives to achieve the institutional mission by supporting a wide range of excellent master’s and doctoral degree programs in the major areas of human knowledge—the physical sciences, the social sciences, the humanities, and the arts—as well as in professional fields that respond to local, state-wide, and regional needs. It is clear that our institution’s mission of becoming a premier metropolitan research university with academically excellent programs that focus on student needs as well as issues and problems of the local community and state of Nevada rests, in large part, with the direction, growth and quality of UNLV graduate education. This commitment is further supported by the integration of the university’s research and graduate program management into the Office of Research and Graduate Studies. This structure strategically links the on-going development of UNLV’s research infrastructure with graduate education and directly enhances scholarship opportunities for graduate students.

The Graduate College seeks to support and advance graduate education, including the student learning, the research, scholarly, and creative activities, and the community and institutional services associated with it. The Graduate College is ideally suited to fulfill this purpose and, in this capacity, will assist academic departments and colleges as well as coordinate efforts with student service and administrative offices to meet the needs and interests of graduate students, graduate faculty, and graduate programs; encourage programs and programmatic emphases that meet the challenges of our rapidly growing local population, state, and region as well as the challenges facing the nation and world; articulate a standard of intellectual excellence that pervades university discussions and decisions about matters that affect graduate education; provide university-wide policies and guidance which define good practice in graduate program administration; and bring faculty and students together to encourage intellectual communication, multidisciplinary and interdisciplinary graduate instruction; and cooperative research and artistic projects.

The Graduate College, in all of its policies and actions, must reinforce and encourage that the institution is an intellectual community where students, faculty, and programs with different backgrounds and interests all pursue advanced knowledge and seek improvement of the human condition for the twenty-first century. This shared purpose ultimately defines the most important reason for the existence of a Graduate College and the larger community.

Your Graduate School Experience

The reasons for enrolling in graduate school are as varied as the people who make up the graduate student population. Your decision to seek an advanced degree means you share with other UNLV graduate students a spirit of adventure that comes with discovery—discovery of new information, new skills—and discovery of the depths of your own intellectual abilities. You will also share a capacity for hard work, because graduate study, whatever the subject matter, is difficult. But at the end of the sometimes tedious, oftentimes exhilarating work in your chosen field, you will have the satisfaction of having mastered a body of knowledge that places you in an elite group. Your achievement of a graduate degree will be a beginning, not an end. It will only be the start of your development and a forecast of your potential for future contributions to your chosen area of interest.

The university's advanced degree programs are based on close working relationships between students and faculty. Although most programs can be developed to meet the needs and interests of the individual student, the student must also satisfy all departmental and Graduate College requirements. Therefore, it is important that all students carefully read the appropriate sections of this catalog and stay in close contact with the faculty members in their degree program. Students are responsible for being aware of and observing the policies and regulations stated in the *Graduate Catalog*.

The Graduate Dean with the advice of the Graduate Council determines policies and procedures of the Graduate College. The Council consists of one delegate from each academic department that sponsors an advanced degree program, and it operates with standing committees. The Graduate and Professional Student Association also has representatives on the Graduate Council. The Graduate Dean and Associate Graduate Dean are ex-officio members of the Graduate Council and each standing committee.

Once enrolled as a student, you will have various responsibilities within the academic community. The conduct of all persons affiliated with the University of Nevada, Las Vegas is governed by the *Rules and Disciplinary Procedures for Members of the University Community*. This code outlines the responsibilities of students, faculty, staff and administration as well as the rules, sanctions and hearing procedures in effect on the campus. Printed copies of the code are available in the Registrar's Office. The UNLV Student Conduct Code is available through the Division of Student Services.

Graduate Student Services

Graduate Student Services offers support for graduate students in many different areas. In cooperation with various offices at the University of Nevada, Las Vegas, Graduate Student Services seeks to provide information and programs aimed at the unique needs of graduate students.

Orientation. Every semester, prior to the beginning of classes, the Graduate College conducts an orientation for new graduate students and Graduate Assistants. Each department and/or program offering a graduate degree provides additional orientation and advising for new students.

Recruitment. UNLV is committed to growing selectively, serving the region, and achieving distinction. In recognition of this commitment, the Graduate College seeks to develop, implement, coordinate, and monitor a university-wide graduate recruitment program. Primary goals of this program are to assist the individual graduate programs to identify potential graduate students and to encourage these students to apply and enroll. Also, the Graduate College participates in the UNLV McNair Scholars Program that helps to identify and prepare under represented and minority students for graduate school.

Thesis and Dissertation Support. For many programs, the thesis or dissertation represents the culmination of the graduate experience. The Graduate College provides guidance, oversight and direction to graduate students and faculty concerning the policies and procedures for final submission of the thesis or dissertation.

Professional Development Programs. The Graduate College works with other campus units to provide a formal, value-added experience for graduate students that will enhance their career development. For example, a Professional Development Program in College Teaching is currently offered in association with the University Teaching and Learning Center to individuals seeking academic careers.

Graduate & Professional Student Association

The Graduate & Professional Student Association was formed in 1980 to provide additional opportunities for graduate students to interact, both socially and academically, and to provide a forum for dealing with problems specific to graduate student life. GPSA's primary goals are to improve the quality of graduate education and to offer graduate student grants for research and other scholarly projects.

Each department on campus has a graduate student representative who communicates all pertinent information concerning the GPSA to his/her constituents. The GPSA has graduate student representation on all standing committees of the Graduate College and participates in at least one community service project each semester.

The GPSA office provides a study and social lounge, a copy service and a computer lab. The office is open year-round, all day and some evenings. Meetings are held on the first Monday of every month, and all graduate students are encouraged to attend and participate. For more information contact the GPSA office, Lied Library, Room 3251 or call (702) 895-2261.

Equal Opportunity

It has been and will continue to be the policy of the University of Nevada, Las Vegas, to be an equal opportunity institution. All decisions of admissions and employment are based on objective standards that will further the goals of equal opportunity.

The university is committed to assuring that all programs and activities are readily accessible to all eligible persons without regard to their race, color, religion, gender, national origin, ancestry, age, disability, Vietnam-Era and/or disabled veteran status, any protected class under relevant state and federal laws, and, in accordance with university policy, sexual orientation.

Persons having questions regarding university policies relating to nondiscrimination law are encouraged to contact the Office of Human Resources and Diversity Initiatives, Campus Services Building, room 237 or call (702) 895-3504.

The Campus and Community

With more than 27,000 students and 3,000 faculty and staff members, the University of Nevada, Las Vegas (UNLV) is located on 340 tree-lined acres in the heart of the fastest growing metropolitan area in the nation. Founded in 1957, UNLV is home to 19 colleges and schools and offers more than 200 undergraduate, master's, and doctoral degrees to students from 47 states, Puerto Rico, Guam, and a host of foreign nations.

Ranked in the category Doctoral/Research Universities-Intensive by the Carnegie Foundation for the Advancement of Teaching, UNLV is home to the world-renowned William F. Harrah College of Hotel Administration as well as Nevada's only law and dental schools

The library is the heart of any university campus, and the Lied Library is a superb facility that utilizes the newest technology, including the Lied Automated Storage and Retrieval (LASR), which integrates industrial automated materials handling technologies with the online library catalog system to provide an innovative solution to long-term library storage. The library also houses a Special Collections department with materials relating to such topics as Nevada history and gaming, among others.

UNLV also has many on-campus research facilities and well-equipped laboratories to serve a growing undergraduate population and more than 5,000 graduate students. Further information on these and other research centers may be found elsewhere in this catalog.

The campus' spacious lawns and walkways are shaded by trees and complemented by desert foliage. In fact, the entire 340 acre campus, dubbed "The Emerald in the Desert," has been designated an arboretum. Just outside the campus are apartments, restaurants, shopping centers, libraries, hospitals and all the other hallmarks of a modern urban area.

To keep pace with the tremendous growth of the University and the community, UNLV in 2004 dedicated its first regional campus at Shadow Lane, which is home to the school of dental medicine as well as a state-of-the-art biotechnology research center.

UNLV is also currently engaged in the development of "Midtown UNLV," a public-private endeavor aimed at creating a culturally diverse university district in the area surrounding the main UNLV campus.

Dozens of musical, dramatic, dance and artistic groups have been formed under the auspices of the university and perform regularly for campus and community audiences. Each year, a number of popular stage and screen performers and recording artists from every musical category are featured in concert in the university's events centers.

Many other campus activities are scheduled for students and the general public. The Consolidated Students of the University of Nevada (CSUN), the student government, sponsors film series', lecture series', dances, intramural athletics, concerts, and special events throughout the year. The "Rebel Yell" student newspaper, UNLV-TV, a campus

and public-affairs television station, and a nonprofit radio station serve the UNLV community.

The university also has excellent sports facilities for use by students, including lighted tennis courts, playing fields, a 50-meter Olympic swimming pool, two gymnasiums, handball/racquetball courts, dance studios, gymnastics and weight-training rooms, baseball and soccer fields, and a full-size track for jogging enthusiasts.

UNLV is a member of the American Association of State Colleges and Universities, the Council of Graduate Schools in the United States, the Western Association of Graduate Schools, the American Council on Education, and the Western College Association. In addition to full accreditation by the Northwest Commission on Colleges and Universities, the university is recognized by the Nevada State Department of Education for preparation in all fields for which it conducts programs.

Las Vegas and the Southwest

Southern Nevada has many attractions. Like any other large metropolitan area, it has fine libraries, museums, community theater, art galleries, and renowned parks which are enjoyed and supported by nearly two million local residents.

University cultural events provide yet another form of entertainment in a city that bills itself as the Entertainment Capital of the World. Two of the university's yearly series, the Charles Vanda Master Series and the Barrick Lecture Series, are extremely popular with students and community residents.

The Charles Vanda Master Series offers visiting performers of the caliber of Isaac Stern, Andre Segovia, the London Symphony, and Itzhak Perlman. The Barrick Lecture Series brings well-known persons to campus for free public lectures on a variety of topics. Lecturers have included Walter Cronkite, Ken Burns, Louis Rukeyser, Benazir Bhutto, Arthur Ashe, Henry Kissinger, John Kenneth Galbraith, Jimmy Carter, and Cokie Roberts. The series also has featured important scientists and academicians like Carl Sagan, Jane Goodall, Mortimer Adler, and Richard Leakey.

Of course, any college experience includes more than the intellectual stimulation of the classroom and the physical confines of the city and campus. It also takes color and character from the university's larger environment. For UNLV, this is the Southwest.

Mild desert temperatures make outdoor recreation possible throughout the year in Southern Nevada. Within a 30-mile radius lie the shores of Lake Mead, massive Hoover Dam and the Colorado River recreation area, the snow-skiing and hiking trails of 12,000-foot Mount Charleston, and a panorama of red rock mountains and eroded sandstone landscapes. In addition, the city is only several hours by car from the beaches of Southern California and the national parks of Utah and Arizona.

Las Vegas enjoys a mild year-round climate, but there are noticeable seasonal differences. The annual average temperature is 79 degrees, but it is not unusual for the mercury to hit the 110 degree mark during the summer and dip into the 30s in the winter. Annual rainfall amounts to only 3.5 inches, much of it falling in the winter when it is snowing in the nearby mountains.

Libraries, Research Centers, Institutes, and Service Agencies

Office of Research and Graduate Studies

The mission of the Office of the Vice President for Research and Graduate Studies is to develop opportunities, policies, and infrastructure for UNLV students, faculty, and staff to support them in providing the highest quality research and creative expression for the benefit of society, with particular focus on the needs of Southern Nevada. The goals of the Office of the Vice President are to: 1) increase funding available to support research and its integration within the educational experience of all undergraduate and graduate students; 2) continuously develop policies, procedures, and infrastructure that enable and enhance scholarship, research, and creative activity, and that reward faculty and student participants; 3) assess and promote progress toward attainment of the goals set forth in departmental, college, and center strategic plans for scholarship, research, creative expression; 4) continuously improve communication of the value of university scholarship, research, and creative activity to all constituencies; and 5) continuously improve the efficiency and productivity of university-level research units and administrative services.

Units reporting to the Office of the Vice President for Research and Graduate Studies include the UNLV Research Foundation, Associate Vice President for Research and Economic Development, the Associate Vice President for Research Services (Office of Sponsored Programs, Office for the Protection of Research Subjects, and the Animal Care and Use Program), the Graduate College, and the Council of University Research Centers, Institutes, and Laboratories. The Office of Sponsored Programs, the Office for the Protection of Research Subjects, and the Animal Care and Use Program support the efforts of faculty, staff, and students in the design, conduct, and funding of research projects that are in compliance with local, state, and federal guidelines. For more information regarding policies and procedures related to research programs, contact Research Services in the Research Administration Building (RAB), (702) 895-4240.

Arnold Shaw Center for Popular Music. Established in May 1985, the aim of the center is to develop a facility to serve scholars of popular music. In addition to books, records, magazines, photographs, posters, sheet music, and standing files of clippings, the center archives the memorabilia of many of the popular singers and instrumentalists who perform in Las Vegas showrooms and who have donated material.

Biomechanics Laboratory. Housed in the department of kinesiology, this laboratory conducts research on movement patterns and their impact on the lower extremities.

Campus Copy Center. The Campus Copy Center serves students, faculty, and staff by providing black and white and color copying, laminating, binding, poster making, digital file output, resume packets, and other related services. It specializes in copying theses and dissertations to Graduate College specifications.

Cannon Center for Survey Research. Founded in 1977, the center conducts sample surveys of the Nevada population on selected topics in the social and policy sciences. The primary mission is to serve the research needs of faculty and graduate students, as well as public agencies and private clients. The center conducts regional and statewide surveys on a periodic basis to provide a continuing assessment of key social indicators. The center also provides training experience for students in research design and data analysis.

Center for Academic Enrichment and Outreach. The center is a one-stop educational center for low-income, disadvantaged, and under-represented populations to receive academic assistance for professional and personal success. The center provides counseling on academics, financial aid, and personal/career development to students from the 6th grade to completion of post-baccalaureate work. In addition, it provides tutoring; skill development; test-taking and test anxiety workshops; academic instruction in math, English, computer science, and reading comprehension; SAT and ACT preparation; scholarship research; and referral to other human services.

Center for Advanced Research. This center, founded in 1985, is designed to promote faculty research in the humanities, social sciences, and the arts. It offers direct and indirect support for research, publications, performances, and exhibitions, and facilitates the acquisition of external grants for these activities. It also publishes an annual bibliography of the research and creative accomplishments of the College of Liberal Arts faculty.

Center for Advanced Study of Algorithms. The center focuses on information technology for both theoretical and applied research, including such diverse areas as online algorithms, combinatorial optimization, approximation techniques, and adaptive methods.

Center for Analysis of Crime Statistics. The Center for the Analysis of Crime Statistics is the Statistical Analysis Center for the State of Nevada. The center provides two essential functions. First, it serves as a clearinghouse for state and local crime and justice data. As a central repository for information supplied by the various components of the criminal justice system, the Center for the Analysis of Crime Statistics is able to provide a comprehensive picture of crime and justice in Nevada. In addition to serving as a clearinghouse, the center also conducts policy-oriented research on a range of topics of concern to state and local policymakers and criminal justice practitioners.

Center on Aging. The mission of the center is to support multidisciplinary research on aging issues. Projects are undertaken to conduct research across academic departments on problems and opportunities associated with the aging process. The center also serves as a dissemination point for knowledge on aging to provide information to the research and policy communities.

Center for American Indian Research & Education. The center serves as a resource for American Indian students and American Indian communities in Nevada and across the U.S.

Center for Applied Mathematics and Statistics. The center provides statistical advice, consulting, and education to members of the UNLV campus and the Las Vegas community. Services include limited subsidized statistical consulting to members of the campus community, extended services to researchers on campus, and statistical consulting to the community on a subcontract fee-basis.

Center for Business and Economic Research (CBER). The center was established in 1975 to offer the skills and education of the UNLV faculty to the local community. The center conducts marketing research and surveys, socioeconomic impact analyses, feasibility studies, and computer systems analyses for both private business and federal, state, and local government agencies.

Center for Cybermedia Research. The mission of the center is to perform world-class theoretical and experimental research in cybermedia and to engage in innovation transfer with stakeholders and affiliates in the university, private, and public sectors.

Center for Democratic Culture (CDC). The center promotes civic education and civility in public discourse through research, scholarly exchange, and community-based programs. It works closely with local organizations in staging forums on the problems of democracy, conducting seminars on the issues central to local community, developing innovative programs in civic education, and building ties to fledgling democracies.

Center for Disability and Applied Biomechanics. The center conducts research on movement patterns in the lower extremities with the goal of improving prosthetic applications and devices.

Center for Educational Policy Studies. The center enables faculty and graduate students from the College of Education to engage in in-depth education, policy study, research, and program evaluation for the purpose of contributing to K-12 school improvement.

Center for Educational Research and Planning (CERP). The center provides the College of Education with services appropriate for building and sustaining a robust scholarly environment for research, publication, and pursuit of external funding. In addition, the center acts as a liaison with the Clark County School District for cooperative research projects for faculty and students in the college.

Center for Energy Research. The center is a focus area for research, information exchange, technical services, and education in energy topics of particular interest to this geographical region (e.g., solar, wind, and alternative fuels). The center also offers student education and technical services.

Center for Excellence in Women's Health. Housed in the Division of Health Sciences, the center seeks to provide for research and educational outreach in the area of women's health.

Center for Evaluation & Assessment. The center provides initial consultation on statistical and research methodologies. For researchers not yet experienced in empirical methods, the center provides expert advice on sampling, questionnaire construction, and data analyses.

Center for Gaming Research. Located within the University Libraries' Special Collections department, the center serves the campus and researchers from around the world with scholarly analysis of gambling and gaming issues. The center continues to build its gaming collection, the largest English-language collection of books, periodicals, government documents, and manuscript collections of gaming-related materials, in both electronic and print formats. Through its website, <http://gaming.unlv.edu>, it also offers access to a vast network of digital resources for the study of gaming.

Center for Health Disparities Research. This center conducts research on health disparities issues for Nevada in partnership with community health organizations. The center also provides educational and research opportunities for students and faculty. Funding to establish and maintain this center is provided by a grant from the National Institutes of Health, National Center on Minority Health and Health Disparities.

Center for Health Information Analysis (CHIA). This center is concerned with providing accurate and timely information regarding health care and the cost of health care to the citizens of Nevada. The center collects monthly data from each hospital in the state which it then processes and verifies. Quarterly reports are provided to the Nevada State Health Resources and Cost Review Division to meet the needs of the public and legislature.

Center for Health Promotion. The center initiates, participates in, and evaluates coordinated activities that enhance the health status of various target groups on local, state, regional, national, and international levels.

Center for Individual, Couple and Family Counseling. The center provides training, research, and service to graduate students in Counseling and Educational Psychology programs and to members of the Las Vegas community. This fully operational counseling center contributes 2,000 hours of low-cost counseling to the community on an annual basis.

Center for Mathematics & Science Education. The administrative center for externally funded research in mathematics and science education, this center seeks to encourage cooperation between the Clark County School District and UNLV's Colleges of Sciences and Education. It also seeks to generate funding by writing joint proposals and manages joint projects undertaken by these partners.

Center for Mechanical & Environmental Systems Technology (CMEST). This center supports research associated with indoor human comfort; indoor gaseous and particulate contamination; air quality; indoor environmental modeling; ventilation and air distribution; sound and vibration; and mass and species transport

Center for Multicultural Education. Housed within the UNLV College of Education, the center is committed to the support of education equity. The center concentrates its activity in the areas of research; professional development support and technical assistance; and dissemination of research articles and materials.

Center for Outreach in School Leadership Development. Established within the UNLV department of educational leadership, the center provides quality professional development opportunities, school improvement resources and services, and research-based information and products to urban and rural school administrators in Nevada and other Western states.

Center for Urban Water Conservation. This center is dedicated to addressing water management issues as they relate to water use in the urban setting. Increasing population in the Las Vegas Valley combined with finite water resources has prompted municipalities and water agencies to initiate water conservation programs. Many areas of water use have been targeted for conservation efforts, but perhaps no area received more attention than the use of water in urban landscapes.

Center for Urban Partnerships (CUP). The mission of this academic research center is to create an interdisciplinary university and community partnership that addresses contemporary issues and ameliorates risk factors facing both individuals and communities. Uniting the expertise of faculty with the experience and needs of the community, CUP strives to stimulate applied research, develop needed programs, and provide a high level of services to the community. Areas of concern include mental health, addictions, environmental issues, public leadership and administration, poverty, juvenile justice, child welfare, criminal justice, addictions, and prevention.

Center for Volcanic & Tectonic Studies. The center's research focuses on the Lava and El Paso Mountains – two ranges in the Mojave Desert of California that are located astride the central Garlock Fault. Research in these areas will engender greater understanding of the evolution of volcanic rocks produced during strike-slip faulting and in the late Miocene-Pliocene development of the Garlock Fault.

Center for Workforce Development and Occupational Research. The mission of the center is to provide comprehensive, workforce-related resources services, professional development opportunities, and research-based information and products to the workforce and education communities.

Cognitive Interference Laboratory. This laboratory conducts, disseminates, and supports research related to interference in human cognition.

CSUN Preschool. The preschool is a developmental early childhood program that provides a safe and nurturing environment for young children. The program promotes the physical, social, emotional, and intellectual growth and language development of young children while responding to the needs of families.

Desert Research Institute. The Desert Research Institute is a division of the Nevada System of Higher Education with offices and laboratories located in Reno, Stead, Las Vegas, and Boulder City. DRI currently conducts research in the primary areas of energy, atmospheric environment, water resources, ecology, anthropology, socio-economics, and demography.

Division of Educational Outreach. The division serves Southern Nevada with a wide range of classes offered year-round to those who wish to continue their education, add professional skills, or simply enrich their lives. Noncredit programs include classes, workshops, seminars, field trips, and extended travel-study programs. Some certificate programs are offered in a variety of business and management areas. Some courses are approved for professional growth in-service credit by the Clark County School District. Other designated noncredit programs offer continuing education units (CEUs) for successful completion.

Engineering Geophysics Laboratory (EGL). The laboratory's mission is to foster research and education in geophysics for engineering applications. The applications emphasized are geotechnical site characterization for the arid environment and geotechnical consequences of earthquake loading.

English Language Center. The center provides access to higher education at UNLV for immigrant, international, and other students learning English who need language, culture, and academic skills to succeed.

Environmental Monitoring Systems Laboratory-Las Vegas. UNLV is home to one of the U.S. Environmental Protection Agency's major research centers. The laboratory's mission is to carry out research on new and improved methods of collecting environmental data, to provide quality assurance services for several of the agency's monitoring programs, and to conduct monitoring operations of national scope with respect to the sources, transport pathways, and ultimate fate of selected pollutants of air, water, and land. The laboratory serves as headquarters for a wide variety of programs aimed at documenting natural and man-made environmental conditions. Through a cooperative agreement, substantial numbers of UNLV students and faculty collaborate with laboratory staff on research projects and in instructional activities.

Exceptional Children's Services. The primary goal of the center is to provide psycho-educational diagnostic assessments to school-age children in Clark County and surrounding areas. This unit maintains a library of assessment instruments available to qualified community practitioners and serves as a primary practicum site for advanced graduate students pursuing degrees in school psychology.

Exercise Physiology Laboratory. Established in 1976, the laboratory conducts research on the physiological effects of physical exercise. An ongoing research project includes 180 men and women who are part of a study investigating the effect of daily exercise on the factors responsible for coronary heart disease. Elite athletes also are evaluated to enhance their performance. The effects of regular exercise on weight control and diabetes are continuing projects as well.

Harry Reid Center for Environmental Studies. The HRC contains five research divisions that conduct research and monitoring activities in Chemistry, Microbiology, Nuclear Science and Technology, Archaeology, and Environmental Assessment. The center also has a Quality Assurance Division and grants management staff. It has a full time staff of approximately 60 scientists, engineers, and management personnel.

High Pressure Science and Engineering Center. The center emphasizes scientific and engineering studies selected to improve the ability to measure, to understand, and to model stockpile materials under high static or dynamic pressures.

Hospitality Research and Development Center. This center was established in 1986 to develop special training programs and materials for the hospitality industry. Hotel Administration and other UNLV faculty members analyze day-to-day and long-term problems in the increasingly complex operations of casinos, food/beverage services, marketing, front office, finance, engineering, and housekeeping.

Information Science Research Institute. The institute is organized to conduct automated experimental research in computing science. Current emphasis is on problems associated with the creation and use of textual information in electronic, or computer readable, form.

International Gaming Institute. The institute provides information about gaming management, conducts research on gaming for use by business and management leaders, and develops training programs for employees, supervisors, and executives.

Institute for Security Studies. The institute seeks to utilize the educational and research capabilities of the university to analyze issues and expand the body of knowledge relating to homeland security and combating terrorism. The institute often partners with federal, state, and local government agencies, as well as private enterprise, in order to achieve its goals.

International Institute of Modern Letters (IIML). The institute is a nonprofit literary activist organization founded in 2000 by business leader and literary philanthropist Glenn Schaeffer. The IIML is committed to supporting both established and emerging writers worldwide and to helping persecuted writers prevail against literary censorship.

Jean Nidetch Women's Center. The Jean Nidetch Women's Center is a resource for all students, faculty, and staff that offers a variety of programs and events to raise awareness of issues important to women, such as sexual or intimate partner violence, personal safety, personal development, and health issues. The center also offers a scholarship program, services for adults returning to school, a non-traditional student support group, and social service information and referral.

Lake Mead/Lake Mojave Research Institute. The institute conducts collaborative research on environmental matters involving the ecosystems of the lower Colorado River basin watersheds of Lake Mead and Lake Mojave. Activities include studying the source, speciation, sorption, transport, and bioavailability of biological and chemical agents in the ecosystems.

Language Resource Center. The center supports the English Language Center and the Department of Foreign Language in language instruction by providing computers, technical support and a variety of multimedia tools to assist and enhance both classroom instruction and self-study by language students. The center also supports UNLV as an open lab available to all students, staff and faculty.

Lied Institute for Real Estate Studies. In addition to coordinating the undergraduate program in real estate, the institute undertakes various extension programs such as Land Faire Nevada and sponsors seminars of interest to the real estate professional.

Literacy Development Center. The center serves as a clearinghouse for the dissemination of information related to the development of literacy in young children (birth to age 8) to parents, teachers, and caretakers in Southern Nevada. It provides a model program that focuses on the prevention of literacy-learning difficulties through early intervention strategies, especially for children of poverty. The center also offers literacy development education for parents, teachers, and caretakers through workshops and instructional sessions.

Marjorie Barrick Museum of Natural History: The museum houses exhibits illustrating the story of human existence and nature in the Southwest.

Motor Behavior Laboratory. The research in this center examines the cognitive aspects of movement, how humans take in information, decide upon an appropriate response, and organize and implement that response, with emphasis on how feedback and practice structure influence learning.

National Supercomputing Center for Energy and the Environment (NSCEE). Established in 1990, the center is a full-service supercomputing facility with on-site and off-site user training, national network accessibility, and a mission for excellence in education and research in supercomputing and its applications. The NSCEE provides supercomputer training and services to academic and research institutions, government and private industry for research and development related to energy, the environment, medical informatics, and health care delivery.

Nevada Center for Advanced Computational Methods (NCACM). The center is a multidisciplinary unit composed of faculty, graduate, and undergraduate students involved in the development and use of state-of-the-art mathematical and numerical algorithms for solution of theoretical and applied problems, with special emphasis on engineering, scientific, and environmental issues.

Nevada Institute for Children. The institute studies a wide range of children's issues in Nevada and proposes changes to state and local policies to advance children's causes. The institute works with community groups, the state legislature, and state and local agencies to transform research into reality.

Nevada Manufacturing Research Center. The center provides a link between UNLV and private industries and governmental agencies in areas where advanced manufacturing processes are applied. It also provides an entrepreneurial research environment for faculty and students.

Nevada Small Business Development Center. The NSBDC maintains a cooperative working relationship between the university and the U.S. Small Business Administration. The primary purpose of the center is to assist existing and new small business enterprises throughout Southern Nevada by helping them plan their growth potential and develop and maintain professional management skills. The center's programs are open to all small businesses free of charge, provided they would not otherwise be able to afford such services. The center's services include one-on-one counseling, market research assistance, business skills assessment, capital formation assistance, new business consulting, business plan analysis, feasibility studies, marketing strategies, and business workshops and seminars.

Oak Ridge Associated Universities. Since 1993, students and faculty of the University of Nevada, Las Vegas, have benefited from its membership in Oak Ridge Associated Universities (ORAU), a consortium of colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members. For more information about ORAU and its programs, contact (702) 895-4240.

Office of Information Technology. The office supports teaching, research, scholarly and creative production, and administration through the effective management and use of information technology resources. The services provided include development and support of applications and information systems; hardware and software maintenance, repair, and replacement in teaching and research facilities, as well as student laboratories; assistance with the development of instructional programs that are less restricted by time and place than those delivered by traditional means; access to the latest in instructional technology; and access to research computing resources. Additional information about the Office of Information Technology can be found at <http://www.unlv.edu/infotech/>.

Oral History Research Center. The purpose of the center is to conduct and collect audiotaped interviews, sometimes supplemented by video segments, of persons selected for their ability to provide firsthand observations on a variety of historical topics in Las Vegas and Southern Nevada. The center was established in 2003 as a part of the University Libraries' Special Collections department.

Professional Development Center. The center was created to respond to the needs of the business and professional community for relevant high-quality noncredit courses, seminars, workshops, and certificate programs for career development and professional enrichment. The center also provides quick and affordable custom-designed programs to meet the specific needs of individual companies or organizations. It also offers comprehensive conference services to business, professional, and educational groups.

Programs for Older Students. UNLV offers courses at the undergraduate and graduate levels during the fall and spring semesters on a space-available basis free to all persons 62 years of age or older. Senior citizens may attend Summer Term courses and pay 50 percent of the regular per credit hour charges. In all cases, students pay for books, other course-related materials, and special fees such as lab fees.

Reprographics/Design Services. This administrative unit is responsible for coordinating and printing a wide variety of university publications and maintaining university graphic standards in print. Reprographics provides offset printing, black and white and color copying, and an assortment of bindery services.

Saltman Center for Conflict Resolution. The center was established in 2003 at the William S. Boyd School of Law to provide a venue for advanced study of the nature of conflict and the methods through which conflicts may be resolved. The work of the center encompasses conflicts arising out of regional, national, and international concerns, and involving both the public and private sectors

Summer Term. Summer Term provides a variety of opportunities for students who wish to begin or continue university study. No formal admission to the university is required and no out-of-state tuition is charged to nonresidents. UNLV's Summer Term offers many of the courses included in the general university curriculum as well as short workshops and seminars.

Teaching and Learning Center. The center's three main purposes are to provide tangible and responsive service designed to meet teaching and learning improvement needs; to promote among faculty a culture of continuous improvement in teaching and learning; and to encourage the commitment to, and concern for, effective teaching and learning. To accomplish this mission, the center offers services such as individual consultations, workshops, formative assessment of teaching, and dissemination of information, among many others.

Transmission Electron Microscopy Lab. The laboratory is a multidisciplinary-user facility that allows researchers to examine the submicroscopic structure and properties of materials

Transportation Research Center. The center conducts research on issues concerning the transportation of hazardous and radioactive waste, urban transportation planning, traffic operations, air quality, and public transportation. It also carries out technology transfer functions for state and local highway agencies in cooperation with the University of Nevada, Reno. It maintains a Geographic Information Systems lab and a technical reference resources center.

UNLV Cancer Research Center. The center was formed to advance knowledge through collaborative, multidisciplinary cancer research and educational efforts. Structured as an research center without walls, academic researchers and medical professionals conduct research and educational activities in a synergistic manner. The center actively encourages participation of science, engineering, and medical academicians, as well as clinical professionals

UNLV Libraries. The UNLV Libraries support the university community by embracing the traditional values of higher education adapted for the global community in the 21st century. Serving more than 27,000 students and 800 faculty, both on campus and at remote locations, the Libraries build collections; provide access to information and services supporting teaching, learning, research, and creative endeavors; and foster information literacy. The main Lied Library and three branches (which include Architecture, Curriculum Materials, and Music Libraries) encompass 327,000 square feet of space. More than 2,500 study spaces are available; more than half of them are equipped with network drops. Laptops are available for in-library use, and wireless will be accessible by 2006. Microcomputer workstations are located in Lied Library's Information Commons and throughout each of the libraries. A Collaborative Learning Center, Graduate and Professional Student study lounge, group study rooms, and a multi-media design studio are also provided. The collections reflect the broad range of UNLV's academic programs. They include more than a million volumes; access to the content of over 15,000 electronic journals; more than 7,000 electronic books; over 200 electronic databases, indexes and other reference sources; more than a million governments documents; and unique, rare and specialized research materials about Las Vegas, Southern Nevada, the gaming industry, and UNLV. The collections encompass an extensive variety of formats such as audio tapes, films, video, DVDs, maps, photographs, manuscripts, music scores, and architectural drawings.

UNLV Public Lands Institute. The institute is dedicated to developing public/private partnerships in support of federal land-management agencies and community organizations whose mission is to protect, conserve, and manage natural and cultural resources.

Nevada System of Higher Education Computing Services. The computer facility located on the UNLV campus is part of the Nevada System of Higher Education computing network. The Las Vegas computers are linked to NSHE computers at other institutions, providing a statewide educational computing resource. Time-sharing terminals, remote batch terminals, and local batch terminals provide students and faculty access to the computer network. The center is responsible for providing equipment and consulting services that support the growth of educational, research, administrative, and public service computing

University of Nevada Press. The University of Nevada Press is a publisher of scholarly books. Established by the Board of Regents in 1961, the press is a public service division of the Nevada System of Higher Education. Its purpose is to make a contribution to the state of Nevada and to the scholarly community by publishing books dealing with history, government, natural resources, ethnic groups, and contemporary affairs.

Western Interstate Commission for Higher Education (WICHE). WICHE aids residents in obtaining graduate and professional level education in fields of study not available within the state. Currently, Nevada is active in the WICHE Professional Student Exchange Program, the Western Regional Graduate Program, and the Western Undergraduate Exchange Program. Support for the Professional Student Exchange Program is through legislative appropriation, and only a certain number of students are certified to receive WICHE funding in the fields of Graduate Library Studies, Optometry, and Veterinary Medicine. Supported fields are subject to change based on legislative action. Qualified residents are able to join residents of eleven other WICHE states in attending programs under the Western Regional Graduate Programs. Through reciprocity agreements among the states and cooperating institutions, students may participate in 90 master's and doctoral degree programs with substantially reduced tuition. Brochures and information regarding these WICHE programs may be obtained by contacting either the Graduate College, University of Nevada, Las Vegas, or Nevada WICHE, Gymnasium, Room 107, University of Nevada Reno, Nevada 89557, telephone (702) 784-4900.

Women's Research Institute of Nevada (WRIN). The institute fosters the social and economic development of Nevadans, recognizes diversity, and builds leadership skills among women through the collection, preservation, and analysis of information on women in the state. As a part of the College of Liberal Arts at UNLV, the institute draws from an interdisciplinary faculty across the university and collaborates on projects with other university centers and programs.

Writing Center. Staffed by English department graduate students, the Writing Center offers all UNLV students and staff members assistance with any writing project. Consultants are available to discuss any stage of the writing process, from generating ideas to developing and polishing later drafts. Consultants can help with projects such as reports, newsletters, essays in any discipline, graduate school applications, and much more. This service, offered through the College of Liberal Arts, is free of charge. For appointments, hours, or more information, visit the Writing Center in the Central Desert Complex, Bldg. 3 Room 301, or call 895-3908.

Student Life

The Division of Student Life provides services and programs to assist student learning and personal development outside of the classroom. We endeavor to create an environment that is safe for, supportive of, and conducive to learning. We are committed to enhancing academic success, campus life, student wellness, and retention for UNLV's students. The division is comprised of five major areas: Academic Success, Campus Life, Center for Academic Enrichment and Outreach, Public Safety, and Student Wellness. In addition, we have responsibility for several facilities: the Moyer Student Union, the McDermott Complex, the Student Health Center, and the residence halls. Useful information, including specifics about programs and services, is available on the division web site: <http://www.unlv.edu/studentlife>.

Vice President for Student Life (895-3656)

The office of the Vice President for Student Life, located in the Flora Dungan Humanities Building, Room 330, coordinates student life programs and services. The vice president works with members of the university community (including student leaders) to ensure that all members of the community understand the university's commitment to student learning and success. We support a number of graduate assistantships to enhance student learning outside the classroom.

Office of Student Conduct (895-2308)

The Student Code of Conduct outlines students' rights and responsibilities as members of the university community. All students are expected to be familiar with the code and to adhere to the guidelines it sets forth; graduate students who work with students in their role as graduate assistants are encouraged to read the code carefully. Copies of the code are available in the office of the Vice President for Student Life (FDH 330 and on the web at: <http://www.unlv.edu/studentlife/judicial/>). Violations of the code should be reported to the Student Conduct Officer who will conduct the fair, thorough process outlined in the Code.

Campus Life (895-3221)

Campus Life is responsible for campus traditions and activities, student leadership development, intramurals and recreation, Greek Affairs, multicultural programs and campus housing. Of particular interest to graduate students, in addition to the many wonderful programs and organizations, might be information about assistantships and internships.

Center for Academic Enrichment and Outreach (895-4777)

The mission of the Center for Academic Enrichment and Outreach (CAEO) is to introduce higher education as an option to populations that have been traditionally under-represented in postsecondary education because of class, social, physical and cultural barriers.

CAEO offers the following services: academic advising, tutoring, instruction in developmental courses (math, science, English, writing, reading comprehension, and English as a Second Language), assistance with college admissions and financial aid/scholarship applications, counseling on college-adjustment issues, school decisions and admissions, personal counseling, as well as referrals to other campus and community resources.

The center's objective is to increase the enrollment, retention and graduation rates of individuals who come from disadvantaged and under-represented backgrounds. TRIO and Gaining Early Awareness and Readiness for Undergraduate (GEAR UP) programs at CAEO are federally funded through the U.S. Department of Education, Higher Education Act of 1964. Detailed information can be found at: www.unlv.edu/studenterv/caeo. Information about specific programs is available on the web at: <http://www.unlv.edu/studenterv/caeo>.

All services provided through CAEO are FREE to those who qualify. CAEO offices are located in the Student Services Complex, Room 201 as well as off campus, at 1455 E. Tropicana Avenue, Suite 650.

Enrollment and Student Services (895-3443)

The Enrollment and Student Services Cluster includes the following units: Registrar, Client Services/Admissions, Undergraduate Recruitment, Student Financial Services, Career Services, First Year Programs and Transition Services, International Students and Scholars, and Learning Enhancement Services. This cluster serves students from the initial stage of a prospective student through career exploration including every aspect of the application, admission, registration, financial aid and academic history process. The following information might be of special interest to graduate students:

Career Services (895-3495) provides comprehensive programs and services for students of all majors, in the form of career planning, career development and job search assistance. Students clarifying career decisions, seeking career-related experiences, or pursuing a professional job search can benefit from the many services of this office.

Disability Resource Center (895-0866 or TDD 895-0652) provides academic accommodations for students with documented disabilities who are otherwise qualified for university programs. This office is designated as the official office for housing records as specified by Section 504 of the Rehabilitation Act of 1973. To establish services, students will need to provide the office with appropriate documentation of their disability from a recognized professional that shows the testing used to determine the disability, the results of that testing, as well as a description of the functional limitations.

International Student Scholars (895-0143) provides assistance to all UNLV international students and scholars to make smooth transitions into successful academic, professional, and social experiences. Our services include providing assistance with employment, visa and travel issues as well as immigration advising and related documents. It is required that all international students attend the New

Student Orientation offered by the campus the week before classes begin. Special sessions for international students are offered as part of New Student Orientation.

Student Financial Services and the Registrar work with undergraduate and graduate students. All other departments work exclusively with undergraduates. The Registrar can be contacted at 895-0892 and Student Financial Services can be reached at 895-3424.

Public Safety and Parking Services 895-3668 (Police) & 895-1300 (Parking)

The Department of Public Safety is divided into three divisions: the Police Division, Parking and Traffic Division, and the Student Security Services Division. All are service-oriented units that provide resources to the university community. The Police Division provides police service to the university 24 hours a day, 365 days per year. All officers are certified by the State of Nevada as Category I Police Officers and have the same authority as metro officers in their respective jurisdictions. Police officers are available for emergency assistance by calling 911. University Police provide other services including crime prevention presentations, bicycle registrations, emergency call boxes on campus, alarm monitoring capability, and a 24-hour per day communications center.

Parking and Traffic Division personnel include UNLV classified employees and student employees. Their primary responsibility is the safety of persons and property through the control of vehicular traffic on the university campus. University parking lots are restricted through the use of parking permits. Parking on campus requires the purchase of the appropriate permit. This permit allows authorized users to park on the campus in accordance with published parking regulations. University parking and traffic regulations, filed with the Secretary of State in accordance with Nevada Revised Statute 396.435, have the force of law. Violators of university parking regulations are issued citations with fines imposed. The regulations are enforced throughout the calendar year. Copies of the rules and regulations are available in the Claude I. Howard Public Safety Building. You may obtain a copy, or other information, by visiting or calling 895-1300, Monday-Friday from 8 a.m. to 5 p.m. Moreover, uniformed parking enforcement officers patrol the university parking lots and are available to assist those who need parking information or those who may be lost.

Student Security Services personnel are uniformed student employees who carry police radios and act as the eyes and ears for the campus police. Suspicious activity is reported to campus police, but no intervening measures are taken by these students, who are not police officers. The Student Security Services Unit also provides a safety escort service to the campus community. Students studying late who wish to be escorted to their residence hall or vehicle need only call 895-3668, and a Student Security Services team will respond to escort them to where they want to go (based on availability). In January 2003, the Department of Public Safety expanded its operations and administrative headquarters to two locations. The Parking, Traffic, Student Security Services Division and Communications/Police

Dispatch Center remain on the main UNLV Campus at the Claude I. Howard Public Safety Building located on Harmon Avenue, across the street from the Environmental Protection Agency complex. UNLV Police Headquarters and the Police Administrative offices are now located on the Paradise Campus, 851 Tropicana Avenue (southeast corner of Swenson and Tropicana). In an emergency, dial 911. For business, information or parking related calls, use 895-3668 (police) or 895-1300 (parking).

Student Wellness (896-3627)

The mission of Student Wellness is to advance the optimal wellness of UNLV students, thereby enhancing their lives and their academic success. This mission is accomplished using a holistic approach to care. The wellness disciplines are represented by professionals include nursing, medicine, psychology, psychiatry, dietetics and nutrition, pharmacology, marriage and family therapy, health education, education, and social work. Student Wellness includes the following departments and services at a glance:

Student Health Center – (895-3370) provides treatment of minor illness and injury, early detection and coordination of care for chronic illness, contraception evaluation and pregnancy testing, acute management and referral for sexual assault, nutritional counseling, onsite pharmacy and lab, free flu immunizations, and free wellness lab tests.

Student Counseling & Psychological Services – (895-3627) provides individual, group, couples and family therapy; crisis counseling, medication prescription and management, psychological assessment and testing, drug and alcohol use assessment and treatment, and educational workshops and presentations.

Jean Nidetch Women's Center – (895-4475) provides educational programs and events, SAFE Team peer educators, nontraditional student support groups, re-entry assistance, and scholarships.

Admission and Registration Information

Admission to the Graduate College at the University of Nevada, Las Vegas is granted to students who present evidence of the ability to pursue a graduate program successfully. The rules and criteria established by the Board of Regents, University of Nevada, Las Vegas, Graduate College, and individual graduate programs determine admissibility.

The Graduate College processes applications and supporting materials when received for the semester indicated by the applicant. All application materials must be received by June 15 for fall and November 15 for spring admission (May 1 and October 1, respectively, for international applicants). Application deadlines may vary by department. Students should contact the department where they are seeking admission for this information.

The Graduate College prohibits concurrent enrollment in two or more graduate degree programs. In no case is a student allowed to work on an advanced degree and baccalaureate concurrently.

In consultation with the Graduate College, departments reserve the right to establish additional admission standards and criteria. It is the responsibility of the applicant to contact the appropriate department for information on additional requirements.

***All admission and registration policies and/or procedures described in this section apply to all advanced degree and certificate graduate students.**

Admission Requirements

Applicants must meet the following academic requirements:

1. Hold a baccalaureate or advanced graduate degree from a regionally accredited four-year college or university.
2. Have a minimum overall grade point average of 2.75 (4.00=A) for the bachelor's degree or a minimum 3.00 GPA (4.00=A) for the last two years.
3. A student who has an advanced degree from an accredited college or university with a minimum overall GPA of 3.00 may, at the option of the Graduate Dean and department, be admitted to an advanced degree program with an undergraduate grade point average of at least 2.00 but less than 3.00.

Application Procedures

All applicants must submit the following admission materials to the Graduate College for consideration:

1. A completed application and nonrefundable admission application fee. The most current application fees for U.S. citizens and international applicants and online admission applications are available online at [http://](http://graduatecollege.unlv.edu)

graduatecollege.unlv.edu. Checks should be made payable to the Board of Regents, UNLV. Applications and attendant materials will not be processed until the application fee is received. Applicants to any UNLV graduate degree program must pay the admission application evaluation fee for each application filed. Denied applicants, who later seek admission to the same or other UNLV degree program, are required to pay an additional application fee.

2. One official transcript from all postsecondary institutions attended, showing all degrees and the dates awarded and extension and correspondence work. Only transcripts sent directly from the institution are considered official. Failure to disclose all course work and/or degrees awarded will result in rescission of admission.

Applicants should send Graduate College admission materials to:

The Graduate College
University of Nevada, Las Vegas
4505 Maryland Parkway, Box 451017
Las Vegas, NV 89154-1017

Submit the following admission materials to the department of interest:

1. One official transcript from all postsecondary institutions attended, showing all degrees and the dates awarded and extension and correspondence work. Only transcripts sent directly from the institution are considered official.
2. Letters of recommendation sent by former instructors, employers, or other professionals who can evaluate the applicant's potential to complete graduate study.
3. Some departments may request additional materials (i.e., resume, portfolio, statement of purpose, etc.).
4. In addition, some departments may require satisfactory composite scores on the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT), Miller Analogies Test (MAT), or other standardized tests.

Requirements and Procedures for International Applicants

International applicants are considered for the Graduate Standing classification only. Besides the admission requirements listed previously, international applicants from countries where English is not the native language, or who did not receive a degree from an institution where English is the language of instruction, must show competency in English. The Graduate College requires a minimum score of 550 (written) or 213 (computerized), or 80 (Internet-based) on the Test of English as a Foreign Language (TOEFL) or 85 on the Michigan Test.

In addition international applicants must also:

1. List your name on all application materials exactly as it appears on your passport.
2. Have translated copies of all post-secondary academic transcripts sent directly to the UNLV Graduate College by the college or university where the work was done.

Note: Credentials not written in English must be accompanied by an English translation certified as true by a university official, an official representative of a United States embassy or consulate, the United States

Information Service, the United States Education Foundation, or an approved professional translating service. Notarized copies of originals or translations are not considered official.

International applicants are strongly encouraged to request a Basic Statement of Comparability be sent to the Graduate College American Association of Collegiate Registrars and Admissions Officers (AACRAO) Foreign Credential Service. Admission decisions for applicants not using this service may be delayed. The AACRAO evaluation request form is available on the Graduate College website.

http://graduatecollege.unlv.edu/PDF_Docs/AACRAO.pdf

3. Submit a High School Leaving Certificate.
4. Submit a completed Certificate of Finance to the Office of International Students and Scholars; satisfy the financial eligibility requirements; and receive their Letter of Admission from the Graduate College (by July 1 if admitted for fall semester and November 15 if admitted for the spring semester) before an I-20 will be issued. Once admitted, international students must consult with the Office of International Students and their academic advisor.

Admission Process

1. A Student Admission File is created upon receipt of an admission application and fee. Applications are not processed until the Graduate College receives all required credentials. To avoid misplaced application materials and processing delays, students should submit the online admission application and fee prior to sending additional materials (i.e., transcripts, test scores, letters of recommendation, etc.). The Graduate College holds applications or materials submitted without the fee for one calendar year. Applicants are responsible for making sure the Graduate College and department receive the appropriate credentials. All application materials, including transcripts, become the property of the university and may not be released to the applicant or any individual.
2. The Graduate College evaluates the application materials and forwards them to the department for review. Upon review of the materials, the department will make a recommendation to the Graduate Dean for approval. Early submission of all application materials to the Graduate College and department facilitates the review process.
3. Applicants will be notified, in writing, of their admission status generally within six to eight weeks. Those accepted to pursue a UNLV graduate degree will receive a Letter of Admission from the Graduate College. The Letter of Admission is an important document that the student should retain.
4. The admission process is completed upon enrollment in graduate-level courses for the specified term and degree program indicated on the Letter of Admission. Failure to enroll, or withdrawal from all course work, during the semester of admission will void the Letter of Admission. To be considered for admission for a future semester, the student must reapply and submit the application fee.
Note: Occasionally a student may be admitted with

deficient undergraduate preparation contingent on the deficiency being corrected by completing one or two undergraduate courses early in the graduate program. Students needing more than two undergraduate courses are advised to consult with the department for a recommendation on which courses they should take to meet the prerequisite admission requirements. These courses will not apply toward the advanced degree.

Transfer Work

Courses used to fulfill requirements for one degree may not be used toward another degree. For UNLV Non-Degree Seeking graduate students, a maximum of 15 graduate credits taken at UNLV may be applied toward a graduate program. Graduate work with a grade of B or higher (3.00, A=4.00) may be transferable into a degree program subject to departmental and Graduate Dean approvals. Grades of B- or lower and courses graded on a satisfactory pass/fail basis are not transferable. With the department and Graduate College approvals, no more than one-third of the minimum number of credits required for the degree (not including credits for thesis, dissertation, and professional/scholarly papers) may be transferred from an accredited graduate degree granting institution.

Second Admission or Readmission to the Graduate College

Students may apply for a second master's degree (in a different department) or a doctoral degree after completing a master's degree. In these cases, students must submit a new application for admission, the fee, and supporting credentials required by the Graduate College and the new department or program.

The Graduate College issues only two Letters of Admission without earning a degree. If a degree results from the admission, there is no limit to the number of admissions.

Change of Department

Students are admitted to pursue an advanced degree in a specific department or program. To change to another department or program, students must submit a new application for admission, the required application fee, and all necessary admission credentials to the Graduate College. Upon admission, the student must withdraw in writing from the original department.

Revocation of Admission

It is assumed that the information provided on the application for admission is complete and accurate. Subsequent evidence to the contrary may result in the admission being revoked and the loss of any credit or degree stemming from the admission. To reapply for admission after a revocation, a new application and fee are required. Students should contact the Graduate College to determine what additional materials are needed. Materials from the previous application, such as official transcripts, may be used.

Admission Status and Classification of Students

Graduate Standing

Students accepted to pursue a program leading to an advanced degree are classified as having Graduate Standing. The Graduate Standing classification allows students to plan a degree program, to request formation of an advisory committee, and be assigned or select a faculty advisor.

Graduate Provisional

Students whose previous academic records are not strong enough to merit Graduate Standing may be granted probationary admission and classified as Graduate Provisional. This classification does not apply to students with deficiencies or insufficient undergraduate credits in the chosen field of study. The Graduate College and the student's department determine placement in this classification.

A provisional student must complete nine credit hours of graduate-level course work selected by the department and listed on the Letter of Admission. The student must complete this course work within one calendar year of admission, with grades of B or higher, (B- grades are unacceptable) before taking additional course work. Failure to complete the required course work in the specified period or a grade less than B (3.00) will automatically cancel the student's admission.

When the Graduate College receives the grades covering the required course work, the student will be given Graduate Standing status. A student may only be admitted as a Graduate Provisional student once.

Contingency Admission

A Contingency Admission status may be granted when the applicant must submit additional material before finalizing admission, i.e., a final transcript of course work in progress while applying for admission. Graduate Standing or Graduate Provisional students may also be classified as Contingency Admission. The Letter of Admission will specify which material must be submitted and the date the Graduate College must receive it. Failure to meet the contingency will automatically cancel the student's admission.

Non-Degree Student

The Non-Degree Student status is assigned to individuals with baccalaureate degrees who wish to take graduate courses but not pursue an advanced degree. Generally, Non-Degree Students may enroll in up to 12 credit hours per semester.

Department faculty are responsible for determining the adequacy of preparation of Non-Degree Students before allowing them to take upper-division or graduate courses which are open to Non-Degree Graduate Students. The student should check with the department about graduate courses accessible to Non-Degree Students. It is the student's responsibility to provide proof of adequate preparation.

A Non-Degree Graduate Student wishing to seek a degree must apply for admission to the Graduate College. Non-Degree Graduate Students may transfer up to fifteen UNLV credits with grades of B or higher into a degree program.

Courses taken as a Non-Degree Graduate Student count toward the degree program at the discretion of the graduate coordinator, and/or department chair, and Graduate Dean.

Undergraduates Taking Graduate-Level Courses

Undergraduates with a minimum 90 semester hours of credit and 3.00 or higher grade point average may enroll in graduate courses. Students in the Honors Program must have a minimum of 45 semester hours of credit and a 3.00 or higher grade point average. The Approval for an Undergraduate to Enroll in 700-level Course Work Form must be completed and necessary signatures obtained and approved by the Graduate College prior to registration. Students may enroll in up to six hours of graduate-level courses during one semester.

Reserving Courses for Graduate Credit. Upon approval, UNLV undergraduates may take 600/700-level course work and reserve the credits earned for possible use in an advanced degree program. Course work reserved for graduate credit may not be used to satisfy baccalaureate degree requirements.

Graduate Courses for Undergraduate Credit. Upon approval, UNLV undergraduates may take 600/700-level course work for use in an undergraduate degree program. Courses used in an undergraduate program may not be applied toward an advanced degree at a later date.

Graduate Record Examinations and Other Standardized Tests

Information concerning standardized examinations required for admission to the degree program is available from the Student Development Center. Some examinations are given only four or five times a year and require that registration be completed a minimum of six weeks prior to the test date. With the exception of the Miller Analogies Test (MAT), students may take the required tests at other colleges or universities if taking them at UNLV is inconvenient for the applicant.

Immunization Requirement

Nevada state law requires all new University of Nevada, Las Vegas graduate students to submit proof of immunization before they may register for classes. New students are required to provide proof of immunity to remove a registration hold. The Graduate College sends immunization forms along with the admission notification. For further information, contact the Student Health Center at (702) 895-3370.

Nevada Residency

The Graduate Dean determines the Nevada residency of graduate students according Board of Regents regulations and the laws of the State of Nevada. Persons, such as Nevada certified school teachers and Armed Forces personnel stationed in Nevada, are normally accorded residency status. A full statement of the regulations is available online at <http://www.unlv.edu>.

Registration

The university outlines specific registration procedures in the Schedule of Classes, which is made available prior to each semester by the Registrar's Office. Students must register for classes using the procedures outlined in the class schedule including enrolling by the dates and times specified for each semester or special session. Students paying fees after the date and time specified in the schedule may be charged a late fee. An administrative drop may result for nonpayment of fees. The registration or enrollment of a student ineligible to attend the university is subject to immediate cancellation. A full-time graduate student is one who is enrolled in nine or more semester credits or equivalent or six credits for graduate assistants.

Adding or Dropping Classes

Students may add or drop a course up to the close of the late registration period. After this date, and with approval, students may make changes only when the circumstance is sufficiently extraordinary to warrant an exception.

Dropping/Withdrawing From Classes

The terms drop and withdraw are used interchangeably. The academic policies and calendar dates for dropping and withdrawing are the same. Drop generally refers to dropping one or more courses during a given semester. Withdraw generally refers to dropping of all courses during a given semester.

A student may drop or withdraw from full semester courses during the free drop period (first ten weeks of the fall or spring semester) without a grade. The instructor must provide a preliminary evaluation of the student's grade before the end of the free drop period. No drops or withdrawals will be permitted after the end of the free drop period as published in the current class schedule (see Grades and Examinations). Refer to the appropriate class schedule for drop dates for special modular courses, short courses, extended education and summer term courses. Students who stop attending class and fail to file an official drop request form with the Registrar will receive a grade of F.

Students who wish to withdraw from all classes must obtain a Withdrawal form from the Registrar's Office, obtain all required signatures, and return the form to the Registrar's Office. The withdrawal is official only after the Registrar's Office accepts it.

A student who has officially dropped a class and who is no longer registered for credit or audit is ineligible for further attendance in that class.

Cancellation of Registration

The university reserves the right to cancel any registration in specific courses for which the student is ineligible. The registration of any student who is ineligible to attend the university is subject to immediate cancellation. The university also reserves the right to cancel the registration of an individual whose attendance, in the opinion of the appropriate administrative officials, would not be mutually beneficial to that person and to the institution.

Cancellation of Courses and Programs

The university reserves the right to cancel any registration in which the enrollment is insufficient to warrant offering the course and/or to eliminate, cancel, phase out or reduce in size courses and/or programs for financial, curricular or programmatic reasons.

The Grading System

The following symbols are used in reporting and recording student grades:

A	Superior
B	Above Average
C	Average
D	Below Average
F	Failing
AD	Audit
I	Incomplete
S	Satisfactory
X	Hold Grade

Note: Faculty members have the option of using plus (+) and minus (-) for grades of A, B, C, and D. Exception: A+ grades are not given.

I or Incomplete Grade

The following regulations apply to the I or Incomplete grade:

1. The I grade is used for content/lecture type courses designed to be completed within one semester and where the student has failed to complete all of the requirements. The instructor is responsible for determining if the reason for noncompletion is satisfactory.
2. An I is given only when a minor part of the course work remains incomplete and the major portion has been completed at a level which is clearly passing.
3. Graduate students receiving an I grade in 600- or 700-level courses have one calendar year to complete all course requirements and remove the I grade; however, the instructor may require that it be made up in less time. If course requirements are not completed within one year, the Registrar's Office will automatically record a grade of F. Students must make up an Incomplete in a 400-level or lower course in one semester.

S or F (Satisfactory or Failing) Grades

The Satisfactory (S) or Failing (F) mark is used upon completion of the thesis, dissertation, professional paper or for noncredit or satisfactory/fail courses. Grade-point values are not assigned for S. Many graduate and professional schools may not accept satisfactory/fail credits, or accept them only if accompanied by written evaluations of the work accomplished in such courses that bear upon the field of specialization. Additional evidence such as GRE or other advanced test results may also be required. UNLV does not accept graduate courses graded satisfactory/fail for use in a degree program except thesis, dissertation, or professional paper credits.

X (Hold) Grade

The X grade is restricted to 500-, 600- or 700-level research or clinical practicum courses where the course requirements may extend beyond one semester.

Grade Changes

A reported grade may be changed because of a clerical error made by the instructor or Registrar. Grade changes require the approval of the Graduate College Dean. Under present university regulations, the Registrar cannot change a grade once six months have passed following issuance of the official student grade report.

Transcripts of Credit

Official transcripts bear the University Seal, the Registrar's signature, and reflect all academic work attempted at UNLV. Upon written request, the Office of the Registrar will issue official UNLV transcripts. Requests should be made at least one week before the date the transcripts are needed. The Registrar will not issue transcripts for any student having a delinquent indebtedness to the university. In addition, transcripts of work from other institutions will not be issued.

Work in progress does not appear on the transcript until the semester or registration period officially ends. Transcripts are not prepared during final examination, grade recording, and registration periods.

Repeat Policy

Any course may be repeated, regardless of the grade received. Credit will be allowed only once for successful completion of the course, except for courses designated in the catalog as allowable repeats. A student may repeat any UNLV course once at UNLV and not have the original grade included in the computation of the grade point average. The repeat grade must be on the same grading option as the original grade. The original grade will remain on the student's academic record with suitable notation. For courses repeated prior to February 1971, both the original grade and the repeat grade are included in the grade point average. Students are responsible for providing the Registrar's Office with written notification when a repeat course is completed. Computer-printed grade reports may not initially compensate for repeated courses. Grade point averages, credits attempted, and credits earned will be manually adjusted.

When a course is repeated more than once, only the original grade is omitted in computing the grade point average. The fact that UNLV has granted a degree to a student shall not preclude the student's right to repeat a course for the purpose of improving a grade. However, class standing will not be affected by the results. A student receiving a final grade of F in a course can obtain credit by preregistering for the course, repeating the class work, and receiving a passing grade.

A failed course cannot be challenged by examination. A failed course does not have to be repeated unless the course is a specific college or department requirement. A student may be allowed to repeat any course once and not have the original grade computed in the graduation GPA. If a course is repeated more than once, only the original grade is omitted in computing the graduation GPA.

Unit of Credit

The unit of credit, or semester hour, is generally defined as one 50-minute lecture a week for a semester. Two or three laboratory hours per week, depending on the amount of outside preparation required, usually carries the same credit as one lecture hour.

Course Numbers

Graduate-level courses are numbered 600-799. Undergraduate-level courses are numbered 100-499.

Symbols

Numbers separated by a hyphen indicate courses which must be taken in sequence. The first semester is prerequisite for the second, for example, 701-702. Numbers separated by a comma indicate courses which may be taken one without the other, for example (701, 702). Various areas of the same course may be taken for credit. They are indicated by letters, for example A., B., etc.

Tuition and Fees

Fees

All fees assessed by the university are subject to change by the Board of Regents. Every effort is made to keep fees low as possible while rendering the desired level of service. Nonresident fees are calculated to cover a major part of the direct cost of instruction.

Graduate Tuition and Fees*

The fees listed below are applicable to Fall 2005 and Spring 2006.

Graduate credit per credit hour fee \$136.00

Non-Resident Graduate Fees:

1-6 credits \$149.50 per credit hour + graduate per credit hour fee

7 or more credits \$4,733.50 per semester + graduate per credit hour fee

Good Neighbor Graduate Fee \$149.50 per credit hour + graduate per credit hour fee

Other Fees

Graduate and Professional

Student Association \$8.00 per semester

International Education \$2.00 per semester

Rebel Recycling \$1.00 per semester

Student Health \$49.00 per semester

Technology \$4.00 per credit hour

Student Life Facilities \$156.00 per semester for 4 or more credits

International Students

(international students only) \$100.00 per semester

*Fees are subject to change

Nonresident Tuition

Students who are not Nevada residents must pay a nonresident tuition fee in addition to the per credit hour fees per semester. Nonresident students taking less than seven credits should contact the Admissions Office for up-to-date fee information. Students eligible under Good Neighbor regulations pay a reduced nonresident tuition fee in addition to the per credit hour registration fee per semester.

Audit Fee

The fee for audit is the same as the fee for registering for credit. The equivalent credits of an audit course are considered in determining if the student is assessed out-of-state tuition.

Board of Regents Regulations for Determining Residency and Tuition Charges

Residency Definitions and Requirements

Purpose

These regulations have been enacted to provide uniform rules throughout the Nevada System of Higher Education ("System") and all member institutions thereof, for the purpose of determining whether students shall be classified as resident students or nonresident students for tuition charges.

Definitions

For the purpose of these regulations, the terms stated below shall have the following meanings:

1. "Alien" means a person who is not a citizen of the United States of America.
2. "Armed Forces of the United States" means the Army, the Navy, the Air Force, the Marine Corps and the Coast Guard, on active duty and does not include the National Guard or other reserve force.
3. "Clear and convincing evidence" means evidence that is clear in the sense that it is not ambiguous, equivocal or contradictory and convincing in the sense that it is of such a credible, reliable, authentic and relevant nature as to evoke confidence in the truth of it.
4. "Continuously enrolled" means enrollment within a normal academic year for which continuous enrollment is claimed. A person need not attend summer sessions or other between semester sessions in order to be continuously enrolled.
5. "Date of matriculation" means the first day of instruction in the semester or term in which enrollment of a student first occurs.
6. "Dependent" means a person who is not financially independent.
7. "Family" means the natural or legally adoptive parent or parents of a dependent person, or if one parent has legal custody of a dependent person, that parent.
8. "Financially independent" means a person who has not been and will not be claimed as an exemption, and has not received and will not receive financial assistance in cash or in-kind of an amount equal to or greater than that which will qualify him or her to be claimed as an exemption, for federal income tax purposes under Section 152 of the Internal Revenue Code (26 U.S.C.-152) by another person, except his or her spouse, for the current calendar year and for the calendar year immediately prior to the date of matriculation or the date a person applies for reclassification as a resident student as provided in these regulations.
9. "Legal guardian" means a court appointed guardian of a dependent person, who was appointed guardian at least twelve (12) months immediately prior to the dependent person's date of matriculation and for purposes other than establishing the dependent person's residence.
10. "Nonresident" means a person who is not a resident.

11. "Objective evidence" means evidence that is verifiable by means other than a person's own statements.
12. "Residence" a term which for the purpose of these regulations is synonymous with the legal term "domicile," and means that location in which a person is considered to have the most settled and permanent connection, intends to remain and intends to return after any temporary purpose. Residence results from the union of a person's physical presence in the location with objective evidence of an intent to remain at that location for other than a temporary purpose.
13. "Resident" means a person who has established a bonafide residence in the State of Nevada with the intent of making Nevada the person's true, fixed and permanent home and place of habitation, having clearly abandoned any former residence and having no intent to make any other location outside of Nevada the person's home and habitation. The term also includes a member of the Armed Forces of the United States who has previously established a bonafide residence in the State of Nevada, but who has been transferred to a military posting outside of Nevada while continuing to maintain a bonafide residence in Nevada. When residence for a particular period is required under these regulations, this shall mean that the person claiming residence for the period must be physically present and residing in Nevada during all of the period required, excluding temporary, short-term absences for business or pleasure.
14. "Returning Student" means a student who re-enrolls after a break in enrollment of one or more semesters. A "returning student" retains prior resident status, if any, as long as there is no indication that the student has established residency elsewhere.
15. "Student" means a person who is enrolled at an institution of the Nevada System of Higher Education.
16. "Tuition" means a monetary charge assessed against nonresident students which is in addition to registration fees or other fees assessed against all students.

Tuition Charges

Tuition shall not be charged to current enrollees or graduates of a Nevada high school. Tuition shall be charged to nonresident students, except that at the community colleges no tuition shall be charged for registration in community service courses which are not state funded.

Reclassification of Nonresident Status

There is a rebuttable presumption that a nonresident attending an institution of the System is in the State of Nevada for the primary or sole purpose of obtaining an education. Therefore, a nonresident who enrolls in an institution of the System shall continue to be classified as a nonresident student throughout the student's enrollment, unless and until the student demonstrates that his or her previous residence has been abandoned and that the student is a Nevada resident. To be reclassified from nonresident to resident student status, a student must submit objective documentary evidence to support the student's claim to Nevada residence. In addition:

1. To substantiate a person's claim to be financially independent, an institution of the System may require such documentation as may be deemed necessary, including but not limited to the following:
 - a. The person's sworn statement;
 - b. A true and correct copy of the federal income tax return of the person for the calendar year immediately prior to the year in which application for reclassification is made, but if no federal tax return has been filed because of minimal or no taxable income, documented information concerning the receipt of such nontaxable income may be submitted;
 - c. A true and correct copy of the person's federal W2 Form filed for the calendar year immediately prior to the year in which application for reclassification is made;
 - d. When deemed necessary for verification of financial independence, a true and correct copy of that portion of the federal income tax return of the person's family or legal guardian which lists dependents for the calendar year immediately prior to the year in which application for reclassification is made;
 - e. Other documented financial resources, including but not limited to the sale of personal or real property, inheritance, trust fund, state or financial assistance, gifts, loans or statement of earnings of the spouse of a married student.
2. To aid a system institution in determining whether a student is a dependent person and whether a dependent's family or legal guardian has been a resident of the State of Nevada for a period of time immediately prior to the date of matriculation as determined by the Board of Regents, a person seeking enrollment as a resident student may be required to submit documentation of the following:
 - a. Established residence of the person's family or legal guardian;
 - b. Legal proof of a guardianship;
 - c. The identification of the person as a dependent on the federal tax return of the person's family or legal guardian.

Uniformity of Decisions

The decision of an institution of the System to grant resident student status to a person shall be honored at the other system institutions, unless a person obtained resident student status under false pretenses or the facts existing at the time residence student status was granted have significantly changed.

Administration of the Regulations

Each institution of the System shall designate an appropriate office to implement and administer these regulations.

1. The designated office shall make any initial decisions on the resident or nonresident student status of persons enrolling in the institution.

2. The president of each system institution shall establish an appeal procedure under which a person may appeal decisions of the designated office concerning tuition or status as a resident or nonresident student to an appellate board.
 - a. A person may appeal a decision of the designated office to the appellate board within thirty (30) days from the date of the decision of the office. If an appeal is not taken within that time, the decision of the designated office shall be final.
 - b. The appellate board shall consider the evidence in accordance with the standards and criteria of these regulations and shall make a decision, which shall be final. No further appeal beyond the appellate board shall be permitted.
3. In exceptional cases, where the application of these regulations works an injustice to an individual who technically does not qualify as an in-state student, but whose status, either because of the residence of the student or his family is such as to fall within the general intent of these regulations, then the Appellate Board shall have the authority to determine that such a student be classified as an in-state student. It is the intent of this provision that it applies only in the infrequent, exceptional cases where a strict application of these regulations result, the sole judgement of the appellate board, in an obvious injustice.

Effective Date of Regulations

*(Due to changes made by the Board of Regents in 2004, please refer to the UNLV website (www.unlv.edu) for up-to-date information.) These regulations shall take effect in the System at the beginning of the Spring Semester, 1997 for each system institution. However, the application of these regulations shall not affect the status of any student now classified as a resident (in-state) student before the effective date of these regulations. Any student enrolled in a system institution prior to the beginning of the

Spring Semester 1997 who had been classified as a nonresident (out-of-state) student is eligible for reclassification as a resident student under the Board of Regents residency regulations in effect at the time the student commenced his or her current period of continuous enrollment. No reclassification under these regulations shall give rise to any claim for refund of tuition already paid to the System.

Good Neighbor Regulations for Reduced Nonresident Tuition

Students who claim residence for at least 12 months in a qualifying California county, or graduates from a high school or community college in a qualifying California county may be eligible to attend the university at a reduced tuition cost. Those claiming residency for 12 months must have maintained legal bona fide residence for at least 12 consecutive months prior to the first day of the semester in which enrollment is sought. Participating counties include: Alpine, El Dorado, Inyo, Lassen, Modoc, Mono, Nevada, Placer, Plumas, San Bernardino, and Sierra. Currently, all undergraduate programs at UNLV are open to Good Neighbor students.

Applications are available online or can be picked up from Student Enrollment Services. Requests for Good Neighbor status must be filed by the close of late registration for the semester in which the student has applied for admission. Any student who enrolls under this policy shall not be eligible for reclassification as a resident student unless the student has subsequently enrolled as a non-Good Neighbor nonresident for the period of one year, or did not enroll in a NSHE institution for at least 12 months immediately prior to the date of application for reclassification to resident student status.

Special Fees and Charges

1. An application fee of \$60 (domestic) is charged to any person applying for admission. It is not refundable or applicable to any other fee. International applicants must pay an additional \$15 evaluation fee (\$75.00 total).
2. Special charges may be made according to current costs for the following:
 - a. Courses requiring equipment, facilities or materials not available on the campus, i.e., golf and certain field courses.
 - b. Courses requiring use of high technology equipment, e.g., computer courses or health profession courses.
 - c. Private instruction in music and similar arts
 - d. Noncredit courses, conferences, workshops, postgraduate professional seminars and similar educational offerings.
 - e. Courses requiring field trips or travel.
 - f. Personal expenses incurred by students in connection with field trips.
 - g. Lab and computer usage fees.
3. The following fees are either assessed or identified at registration.
 - a. A late registration fee of \$25 per day to a maximum of \$250 is assessed to students who do not complete registration by the date designated. Summer Term students are assessed a late registration fee of \$25 per day until the end of the late registration period for that Summer Session. In case the time designated for registration is not adequate, the Registrar may defer the assessment of this fee for one day.
 - b. Returned Check Fee. Personal checks are accepted in payment of fees owed to the university, although no counter checks or checks altered in any way are accepted. A collection fee of \$25 is assessed for any check returned unpaid by a bank. The check must be made good within 10 days or it will be turned over to a collection agency, and the student will be liable for all collection costs and any other related costs. If a personal check is returned from the bank, the university reserves the right to place the student on a cash basis only and withdrawal procedures may be initiated at the option of the university. A stop payment placed on a check does not constitute withdrawal from courses. Official

- withdrawal must be processed as returned checks and are subject to the same fees and collection cost.
- c. A graduation fee of \$50 will be billed to the student's account after the application for graduation is filed in the Graduate College. If a student fails to meet graduation requirements after a diploma has been ordered, \$2.50 of the fee is forfeited.
 - d. Late application for graduation, \$20.
 - e. A fee of \$45 for Master Thesis publication and \$55 for Doctoral Dissertation publication will be billed to the student's account after the application for graduation is filed.

Student Health Fee

The Student Health program fees for Fall, Spring, and Summer semester classes are not to be confused with the voluntary Student Health Insurance plan. Program fees support various services offered by the Student Wellness Cluster.

The Student Health program facilitates on-campus educational experiences and leadership opportunities for all UNLV students; is responsible for public health protection of the UNLV community; provides access to health care and provisions or coordination of health needs for students; provides student counseling and psychological services; and includes the Jean Nidetch Women's Center

Group Health and Accident Insurance Fee

The Student Health Insurance plan is available to students formally admitted and currently enrolled taking six or more undergraduate credits or graduate students taking three or more credit hours. This plan is not to be confused with the **student health program fee** that all registered students pay for fall, spring, and summer sessions.

The Student Health Insurance provides services beyond those available through the Student Health Center for eligible on and off campus medical services. You may sign up for the Student Health Insurance by picking up an enrollment packet at the Student Health Center or Bursar's Office prior to the beginning of Fall, Spring, and Summer sessions or by accessing the web at www.associatedinsuranceplans.com/UNLV.htm

Grants-in-Aid

Each student is expected to pay all assessed fees on registration day unless a grant-in-aid is secured prior to registration day. Students are responsible to pay their portion on time. Late fees and/or withdrawal may be initiated for a student's portion and/or reported to a credit bureau. Legal proceedings may be initiated for any default accounts receivable.

Delinquent Accounts

A student or former student having a delinquent account receivable or an overdue student loan of any amount with any division of the Nevada System of Higher Education shall not be permitted to register, receive any type of transcript of records, grades, diploma or certificate or obtain services from any division. The university reserves the right to refer

any delinquent account to a collection agency and/or report to a credit bureau. Legal proceedings may be initiated for any delinquent account.

Deferred Payment Option

Deferred payment is available to students who are registered for seven credits or more and are not receiving any sort of financial aid, grant-in-aid, etc. There is a \$20.00 service charge for all deferred fee payment plans. The \$20.00 service charge plus 50 percent of the per credit fee, nonresident tuition (if applicable), and 100 percent of special fees are due by the first installment date. Second installment is due by Friday of the fourth week of instruction. Failure to pay the second half of the deferred payment on schedule will constitute withdrawal from the university. The tuition will still be owed, but the student will not receive credit for the courses. Any delinquent accounts may be reported to a credit bureau. All delinquent accounts not paid as required will be sent to a collection agency. The student is responsible for all collection costs, attorney fees, etc. All students must pay their tuition in full at registration or be on an approved deferred payment to be considered enrolled for the semester. All unapproved accounts will be disenrolled. No exceptions. The university reserves the right to deny deferred payment to any student who does not pay tuition and fees as scheduled, including late fees.

Refund of Fees

Students who withdraw from the university receive a refund of fees according to the schedule below, which is subject to change by the Board of Regents. All requests for exception to the refund policy for extraordinary circumstances must be made to Student Enrollment Services or the Fee Appeal Committee. An appeal form is available at Student Enrollment Services, Cashier's Office or the Bursar's Office website.

1. For all UNLV students, including auditors, for net credit load reductions and withdrawals from the university, the refund policy is as follows:
 - A. WITHIN THE FIRST WEEK OF INSTRUCTION. (1) 100 percent credit of all fees.
 - B. AFTER THE FIRST WEEK OF THE INSTRUCTIONAL PERIOD OF A REGULAR TERM. (1) 50 percent credit for **total** withdrawals from all courses until the end of the sixth week. No credit for total withdrawals after the end of the sixth week. (2) 0 percent credit for partial withdrawals.
2. For all UNLV students, including auditors, for net credit load reductions and withdrawals from the university during the Summer Term, the refund policy is as follows:
 - A. Courses dropped prior to the first day of the instructional period will receive a 100 percent credit.
 - B. Courses dropped within the first 20 percent of the course period, as defined by Student Enrollment Services, will receive a 50 percent credit.
 - C. There will be no credit for courses dropped after 20 percent of the course period has passed.

3. No credit shall be made for health and accident insurance premiums.
4. Modular courses follow different refund policies than stated above. Inquire at Student Enrollment Services for details regarding a particular modular course's refund policy.
5. Upon written approval of the Vice President for Student Life, a full refund of all registration fees and tuition shall be given upon official withdrawal at any time during the first eight weeks of the semester in the following circumstances:
 - A. Induction of the student into the U.S. Armed Forces;
 - B. Death of a parent, spouse, child or legal guardian of the student; or

- C. Death of a student.
- D. No refund is made if withdrawal is after eight weeks, regardless of the circumstances. All refunds are made by check.
6. In most cases, federal regulations require that refunds for students receiving financial aid must be refunded back to the financial aid program rather than the student. For information about exemptions to this policy, please contact Student Financial Services. Dropping below full time for students on financial aid may invalidate eligibility for financial aid. Students may owe UNLV for financial aid refunds.

Room and Board Refund

Students withdrawing from the residence hall will receive refunds according to the terms and conditions of the residence and dining hall contract.

Financial Assistance

The University of Nevada, Las Vegas subscribes to the following statement that has been adopted by the Council of Graduate Schools in the United States and by most of the leading graduate schools in North America:

Acceptance of an offer of a graduate scholarship, fellowship, traineeship, or graduate assistantship for the next academic year by an actual or prospective graduate student completes an agreement which both student and the graduate school expect to honor. In those instances in which the student indicates acceptance prior to April 15 and subsequently desires to change plans, the student may submit in writing a resignation of the appointment at any time through April 15 in order to accept another scholarship, fellowship, traineeship, or graduate assistantship. However, an acceptance given or left in force after April 15 commits the student not to accept another appointment without first obtaining formal release for that purpose. It is further agreed by the institutions and organizations subscribing to the above resolution that a copy of this resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer sent to a first-year graduate student before April 15.

Student Financial Services

The University of Nevada Las Vegas provides a wide variety of assistance to finance higher education expenses. Grants, scholarships, part-time employment, and educational loans are available to help students meet their educational costs while attending UNLV. Students are encouraged to explore all possible resources. Financial Aid Administrators are available to discuss the variety of resources available and to assist graduate students in the application process. Graduate students may refer to the *Financial Assistance* section of this catalog for specific financial assistance programs. For further information, contact Student Financial Services at (702) 895-3424. You may also visit our office located on the second floor of the Student Services Complex, or visit our web site at <http://financialaid.unlv.edu>.

Federal Loan Programs

Federal Perkins Loans

A Federal Perkins loan is a low-interest (5 percent) loan available to graduate students that is made through the university. Actual award amounts depend on federal and institutional funding levels. Preference is given to those applicants who are attending at least half time and have the greatest financial need. The total amount awarded is determined by financial need.

Application must be made with the FAFSA, which must be mailed to the federal processing center by February 1. Priority is given to those with the greatest need whose federal financial aid information is received by UNLV before the priority filing date.

Federal Direct Stafford Loans

Direct Stafford loans are low interest loans to assist you in paying for your college education. The interest rate is variable and set annually, not to exceed 8.25 percent. You may call Student Financial Services or contact the Federal Aid Information number at 1-800-433-3243 for the current interest rate. Your loans may assist you in meeting your tuition and or living expenses. You do not have to start repaying them until you drop below half-time enrollment, withdraw completely from school, or graduate.

There are two types of Stafford loans:

- a. The Federal Direct Subsidized Stafford Loan is based on financial need. Interest on this loan is paid by federal taxpayers while you are in school attending at least half time.
- b. The Federal Unsubsidized Loan is available to students regardless of financial need. You will be charged interest from the time the loan is disbursed until it is paid in full.

Graduate Assistantships

A number of state-supported and extramurally funded graduate assistantships are available. The most important regulations governing these positions are:

1. Applications must be sent to the Dean of the Graduate College no later than March 1 proceeding the fall semester in which an assistantship is sought. Applications may be submitted after this date in case of unexpected openings occurring for the fall semester. In rare cases where an assistantship is available for the spring semester, the application deadline is **November 1**.
2. Application forms are available online at http://graduatecollege.unlv.edu/info_students/grad_assist.htm. All admission materials must also be on file by these dates: March 1 or November 1.
3. An assistantship is normally offered for a full academic year. If a student seeks renewal of an assistantship for the next year, a new application form must be submitted.
4. Currently, a graduate assistantship carries with it a stipend paid monthly for the academic year. This stipend may vary for extramurally funded assistantships. Tuition and fee waivers are also included with the assistantship. These waivers are approved only for work directly related to the student's degree program (courses numbered 600 and approved for graduate credit and 700-level courses). This waiver covers most of the per credit hour fee. The tuition waiver covers the full amount of out-of-state tuition. Tuition and fee waiver amounts may vary for extramurally funded assistantships.
5. Generally, graduate assistantships are not available during Summer Term. However, fee waivers are available for Summer Term after a contract year has been completed. Fee waivers are also available for audited courses. The above policies may differ for extramurally funded assistantships.
6. Graduate assistants must have graduate standing status at the time they begin their assistantships.

7. International students whose graduate assistantship includes instructional duties (lecture, discussion groups, laboratory supervision, tutoring) must have received a successful grade on the Test of Spoken English (TSE) prior to assuming these instructional duties.
8. Graduate assistants must carry a minimum of six semester hours of graduate credit per semester. To carry more than twelve semester hours of credit, the department chair, academic dean, and the Graduate Dean must approve an Overload Petition.
9. Graduate assistants are expected to spend on the average 20 hours per week on departmental duties in either instruction and/or research.
10. Graduate assistants may not accept employment on or off campus without written permission from their faculty advisor, department chair, and Graduate College Dean. Graduate assistants are normally prohibited from taking additional employment.
11. Graduate assistants are employed by the university to conduct work in exchange for compensation. In this capacity they are expected to report in the same time-frame as faculty, i.e., during academic semesters and not during break or vacation times. As employees Graduate Assistants must report one week prior to commencement of classes both fall and spring semester. Exceptions to this statement may be negotiated at the time of employment; however, both parties must agree to the arrangement and approval must be obtained from the Chairperson, Academic Dean and Graduate Dean.
12. New graduate assistants are expected, as part of their contract obligation, to attend the Graduate Assistant Teacher Training and General Orientation Sessions that are offered at the beginning of each fall semester.
13. Graduate assistantships will be terminated if the student does not satisfactorily perform assigned duties. Assistantships will also be terminated if a student does not make satisfactory progress toward the degree. Unsatisfactory progress includes, but is not limited to: filing a degree program late; receiving a grade of less than B; failing to remove an Incomplete grade after one calendar year; and failing comprehensive or qualifying examinations as required by the degree program.
14. Offers of assistantships, whether state-supported or extramurally funded, are valid only if they come from the Dean of the Graduate College.

GREAT Assistantships

GREAT Assistantships are made possible with funds provided by the Graduate College and the Office of the Associate Provost for Research. The assistantships are awarded on a competitive basis for research and creative activity conducted during the summer session.

Recipients must have a minimum 3.00 grade point average and enroll in at least one credit hour during the summer session.

Graduate Scholarships and Fellowships

To be considered for any graduate student scholarship/fellowship, the applicant must:

1. Submit a completed scholarship/fellowship application to the Graduate College.
2. Attach to the application a statement of purpose specifying how the award would further academic and professional goals of the applicant.
3. Submit two letters of recommendation, preferably from former instructors or other professionals, discussing the applicant's academic qualifications. Letters sent for admission purposes do not meet this requirement.
4. The application deadline for all materials to be received by the Graduate College is March 1 for the following year.

Some scholarships and fellowships have additional requirements. Students should contact the Graduate College for this information.

The President's Graduate Fellowships

The President's Graduate Fellowships are provided by funds from the UNLV Foundation as directed by President Carol C. Harter for the research support of doctoral students. Four awards are currently given, each offering a \$15,000 fellowship with full fees paid (up to 12 credits) including all out-of-state tuition, if applicable. Applicants must be doctoral students working primarily on the dissertation, have a minimum graduate GPA of 3.50, and enroll as a full-time student (at least nine graduate credits) in each semester of the fellowship year.

Barrick Fellowships

The fellowships were established by an endowment from Marjorie Barrick and are given to outstanding doctoral students who have demonstrated excellent scholarship during their graduate study at UNLV. Two awards are given, each offering a \$14,000 fellowship with full fees paid (up to 12 credits) including all out-of-state tuition, if applicable. Applicants must have completed at least 24 credits of doctoral study, have a minimum graduate GPA of 3.50, and enroll as a full-time student (at least nine graduate credits) in each semester of the fellowship year in order to devote maximum effort to doctoral study. Criteria for selection will also include demonstrated excellence in research.

Alumni Association Graduate Scholarships

The Alumni Association Scholarships are given to outstanding master's students who received their undergraduate degree from UNLV. Three awards are given, each offering a \$1,000 scholarship for the academic year. Applicants must have completed at least 12 credits of graduate study at UNLV, have minimum undergraduate and graduate GPAs of 3.50, and enroll for six or more graduate credits in each semester of the scholarship year.

James F. Adams/GSA Scholarship

The UNLV Graduate Student Association established these scholarships in honor of Dr. James F. Adams, former Dean of the Graduate College (1980-85), to recognize academic achievement of master's students. Six awards are given, each offering a \$1,000 scholarship. Applicants must have completed at least 12 credits of graduate study at UNLV, have minimum undergraduate and graduate GPAs of 3.50, and enroll for six or more credits in each semester of the scholarship year.

Summer Session Scholarship

The Summer Session Scholarships are available to enable summer study for doctoral students. However, excellent master's and specialist students may be considered. Ten awards are given each offering a \$2,000 scholarship during the summer. Applicants must have completed at least 12 credits of graduate study at UNLV, have minimum undergraduate and graduate GPAs of 3.00 and enroll for six credits in any one or combination of summer sessions. Criteria for selection will also include summer plans for conducting thesis or dissertation research.

Graduate Student Association Scholarship and Fellowship Endowment

The Graduate Student Association has initiated a fund for graduate student support. To be considered for a scholarship, the applicant must be enrolled for six or more semester hours of courses for two consecutive semesters after receiving the award.

McNair Post-Baccalaureate Scholarships

Administered by the Graduate College, McNair Post-Baccalaureate Scholarships are awarded in open competition to first-year graduate students who participated in a McNair Scholars program at UNLV or other institution. To be considered for the scholarship, applicants must have an undergraduate grade point average of 3.00 and graduate standing status at the time the scholarship begins. Recipients of the scholarship must enroll in a minimum of nine credit hours for two consecutive semesters.

Alumni Most Outstanding Thesis

Each year the Alumni Association recognizes an outstanding master's thesis with a monetary award and certificate of recognition. Other meritorious theses may also receive a certificate of recognition.

Foundation Dissertation Award for Academic Excellence

Each year the UNLV Foundation recognizes an outstanding doctoral dissertation with a monetary award and certificate of recognition.

Foundation Most Outstanding Creative Arts Award

Each year the UNLV Foundation recognizes an outstanding student in the College of Fine Arts with a monetary award and certificate of recognition.

Employment

On-Campus Employment

Several campus departments and offices employ students in a variety of positions. These jobs can be viewed on the Student Financial Services web site accessible through <http://www.unlv.edu>. On-campus employment listings are available to graduate students enrolled in at least five credits at UNLV. Financial need is not a criterion for on-campus employment.

Job Location and Development

Employment opportunities are offered to UNLV students by community businesses and individuals. These jobs can be viewed on the Student Financial Services web site accessible through <http://www.unlv.edu>.

In addition to job listings, the JLD Program sponsors biannual Job Fairs where employers from businesses, government agencies, and hospitals, to name a few, come to campus to discuss part-time employment opportunities.

Federal Work Study

The Federal Work Study Program is a federally funded financial aid program awarded as part of the financial aid package. This program enables students to earn a portion of their college expenses through employment with a UNLV department or office or off campus with contracted nonprofit agencies. Community service is a major goal of this program. If available, students may choose jobs related to their academic majors and career objectives. Work hours may also be arranged according to class schedules.

To qualify for a Federal Work Study job, applicants must meet the eligibility requirements of the federal financial aid programs. One requirement, financial need, is determined by Student Financial Services and based on income and asset information entered on the Free Application for Federal Student Aid (FAFSA) application.

Funds are limited. Therefore, applicants must mail the completed FAFSA application to the federal processing center by February 1. Questions concerning the eligibility requirements or application process may be directed to Student Financial Services, second floor, Student Services Complex.

Academic Policies

***All academic policies and procedures described in this section apply to all advanced degree and certificate graduate students.**

Student Responsibilities

The policies and regulations of the graduate program or department, the Graduate College, the University of Nevada, Las Vegas, and the Board of Regents are subject to review and change. A copy of the Graduate College Policy Manual is available in the Graduate College office.

It is the responsibility of students to know and observe all regulations and procedures relating to their graduate program, the Graduate College, and UNLV. In no case will any regulations be waived or an exception granted based on a plea of ignorance of, or contention that the graduate program, Graduate College, or university did not inform a student of the regulations or procedures. Questions regarding graduate-level study regulations and their interpretation should be addressed to the Graduate College.

Academic Integrity

All members of the UNLV community are dedicated to learning. In responding to this dedication, the university demands a high level of scholarly behavior and academic honesty on the part of students, faculty, staff, and administrators.

Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated, for example, if they copy the work of another; use unauthorized notes or other aids during an examination; turn in a paper or an assignment written, in whole or in part, by someone else as their own. Students are guilty of plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources or if they paraphrase ideas from such sources without acknowledging them. Students guilty of, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or removed from the program. Additionally, UNLV has established policies regarding research misconduct among students, faculty and staff. Research misconduct pertains to commission of any of the following acts: falsification of data, improper assignment of authorship, claiming another person's work as one's own, unprofessional manipulation of experiments or of research procedures, or misappropriation of research funds. (*Adapted from the 2005-06 Graduate Catalog Northern Illinois University*).

If a student is deemed by a faculty member to be guilty of academic dishonesty, where applicable, the student may be assigned a failing grade for the corresponding segment of the course or for the entire course. The faculty member or administrator also may initiate disciplinary review under

procedures described in the Nevada System of Higher Education document *Rules and Disciplinary Procedures for Members of the University Community*. Disciplinary sanction options described therein include warning, probation, suspension, and expulsion or revocation of a degree if a degree has been previously awarded. In all cases the faculty member is responsible for recording the circumstances, notifying the student in writing, and for giving the student an opportunity to reply. Appeals go to the chair of the student's academic department, academic dean and Graduate Dean.

If a graduate student fails to maintain the standards of academic or professional integrity expected as defined in writing by the discipline or program, the student's admission status in his or her program is terminated. In addition, if any member of the university community is deemed guilty of academic dishonesty, action may be brought under the *Rules and Disciplinary Procedures for Members of the University Community*. Students may wish to obtain a copy of the UNLV Student Conduct Code and Policies, available at <http://www.unlv.edu/studentlife/judicial/StudentConductCode04.pdf>

Degree Requirements and Procedures

Degree requirements are usually completed under the policies and regulations listed in the Graduate Catalog in effect at the time of admission. However, and with departmental and Graduate College approval, the Graduate Catalog in effect during the semester in which degree requirements are completed may be used.

All students seeking an advanced degree must adhere to the regulations discussed in this section. With Graduate College approval, departments may have additional specific degree requirements that students must meet to receive an advanced degree.

The Advisor

Students are assigned an advisor at the time of admission into the Graduate College. The advisor is selected by the department from its Graduate Faculty. At any time after admission, a student may request a change of advisor and, upon departmental recommendation and Graduate College approval, the advisor will be changed.

The Advisory Committee

The advisory committee is responsible for guiding the student through the graduate program, assisting with the thesis or dissertation (if required), and administering the final examination. Not all graduate degree programs require the appointment of an advisory committee. Students should consult with their advisor to determine whether or not an advisory committee is necessary. All members of the committee should have expertise in the student's area of concentration. Generally, four Graduate Faculty members comprise an advisory committee: three from the student's department and one graduate faculty member from another department to serve as the Graduate College representative.

One of the three graduate faculty members from the department serves as the student's advisor and committee chair. The Graduate College must approve the Graduate College representative suggested by the student and advisor to serve on the committee. Occasionally, it is permissible for an additional graduate faculty member(s) to be placed on the committee. This exception requires the approval of the Graduate Dean.

Master's and doctoral students must submit the Appointment of Advisory Committee form to the Graduate College before establishing the degree program.

The Degree Program

Students, with their advisor and advisory committee, must prepare a proposed graduate degree program. This degree program, which outlines the courses the student will complete for the degree, should be thoughtfully prepared. The degree program of study must comply with the regulations of the graduate program or department, Graduate College, and university. The degree program requires the approvals of the student, advisor, the graduate coordinator, the appropriate academic dean, and the Graduate Dean.

For master's students, the proposed graduate degree program must be submitted to the Graduate College prior to students completing 16 credit hours of work toward the degree. If students request that 12 or more credit hours taken prior to admission be considered for use toward the degree, the program must be submitted to the Graduate College by the sixth week of the first semester of enrollment. Doctoral students must submit the proposed graduate degree program by the end of the third semester of enrollment. With the recommendation of the department, limited changes in the degree program may be made with Graduate College approval.

Final Research and Creative Documents

The most important components of a graduate education are the final scholarly research and professional papers or projects, which must be completed to meet the requirements of the graduate degree. The process followed in developing the final product demonstrates the student's research, scholarship, creative ability, and/or written communication skills in the chosen discipline. The final document is intended to benefit the student, the academic discipline or profession, and sometimes, society.

Final documents, including theses, dissertations, professional or scholarly papers, and projects must meet acceptable standards of the given profession. Theses and dissertations must also meet Graduate College standards according to *The Guide to Preparing & Submitting a Thesis or Dissertation*. The Graduate College and advisory committees expect students to give careful attention to the style and format of the final scholarly or creative documents.

Students required to complete and defend a final research or creative document must submit the Prospectus Approval Form to the Graduate College along with a brief written statement describing the content of the document. The Graduate College requires students working on a final research or creative document to register for three semester hours of credit each semester (excluding summer) until the

document has been completed and has been given final approval. Students should contact the department to determine which document is required to complete their degree program.

The Thesis and Dissertation

Some departments require a thesis, or offer the option of a thesis, for the master's degree. All doctoral programs require a dissertation. Students must submit the Prospectus Approval form to the Graduate College at the same time the degree program is submitted for master's students and to advance to candidacy for doctoral students. The thesis or dissertation should demonstrate the student's ability to select a specific problem or topic, to assemble pertinent and necessary data, to do original research, to organize ideas and data acceptably, and to prepare a written report in clear and effective English. *The Guide to Preparing & Submitting a Thesis or Dissertation* is available on the Graduate College website at <http://graduatecollege.unlv.edu>. Students should closely follow the instructions in the guide. Matters of form with respect to capitalization, abbreviation, quotations, footnotes and bibliography should conform to the discipline's standards. Departments will advise the student on which style manual is appropriate.

The minimum number of thesis credits required for a master's degree program is six. For the doctoral degree program, the minimum number of dissertation credits is twelve. A grade is not reported for thesis or dissertation credits. When the final copies of the thesis/dissertation are submitted to the Graduate College and approved by the Graduate Dean, the title of the thesis/dissertation is posted on the student's transcript with the number of credits given. Unless approved for a leave of absence, a student must register for a minimum of three thesis/dissertation credits each semester (summer excluded) until the thesis or dissertation is completed, submitted to the Graduate College, and the student graduates. However, students intending to complete, defend, submit a thesis or dissertation to the Graduate College, and/or graduate during the summer term, must be registered for a minimum of three credits.

No later than eight weeks prior to the last day of instruction in the term the student will graduate, a draft of the work must be submitted to the advisory committee. The committee will review the thesis or dissertation for any corrections and changes, which must be incorporated before the final examination (oral defense) and final typing. The completed, unbound work must be resubmitted to the committee at least one week prior to the final examination.

The Graduate College must approve all theses and dissertations for final printing. It is recommended that an initial format check be performed by the Graduate College by the eighth week of the semester the student intends to graduate. Upon approval, two copies of the thesis or dissertation must be submitted to the Graduate College two weeks prior to the end of instruction of the term the student intends to graduate. The copies must be unbound, signed by all members of the advisory committee and in final form. The Graduate Dean only can give permission for an extension of this deadline.

In rare circumstances a student may be permitted to complete the thesis or dissertation away from campus. After considerable progress has been made in collecting data and outlining the work, the student may petition to complete the thesis or dissertation in absentia, waiving the registration requirement. If the petition is approved, the advisor and Graduate Dean along with the student will determine the requirements for completion of the work.

Professional/Scholarly Paper and Projects

Master's students not pursuing a thesis option may be required to complete a professional/scholarly paper or project as part of the degree program. Students are encouraged to use *The Guide to Preparing and Submitting a Thesis or Dissertation* when preparing a professional paper. Professional/scholarly papers or projects are not, however, reviewed, retained, or approved by the Graduate College.

Graduate Program Examinations

There are three major examinations which students may be required to pass in order to complete a graduate program. The following descriptions are general and may be used interchangeably by departments or programs. For the application of these terms and their use by a particular department or graduate program, refer to the appropriate section of this catalog.

Qualifying Examinations

Some departments may require doctoral students to take a qualifying examination as part of the admission screening process or for diagnostic purposes shortly after admission. The examination may be written, oral, or both.

Comprehensive and Final Examinations

Most graduate degree programs require students to successfully complete a comprehensive or final examination. For master's students, the comprehensive or final examination is generally conducted during the last semester or term of enrollment in which a student intends to graduate. For doctoral students, the comprehensive, or preliminary, examination is generally taken after all course work, except a dissertation, has been completed and before advancing to candidacy. The examination is intended to test the student's knowledge of the area of specialization and may be written, oral, or both at the discretion of the department. If the examination is written, members of the advisory committee may submit questions, all must read the questions in advance, and all must read and evaluate the student's answers. If oral, all members of the advisory committee must be present and may question the student.

The comprehensive, final, or preliminary examination must be administered at least three weeks before the last day of instruction of any given semester or term. Students must be enrolled for at least one graduate-level credit during the semester or term the comprehensive or preliminary examination is taken. For comprehensive and final examination requirements, contact the department or refer to the appropriate section of this catalog.

In the examination, the student must be able to demonstrate a comprehensive understanding of a broad field of study and a detailed understanding of a more limited field. The advisory committee must unanimously pass the student. If the committee votes unanimously to fail the student or the vote is not unanimous to pass, the student, in consultation with his/her advisor, may request the committee to administer a second examination. The student must wait at least three months before taking the second examination.

Oral Defense

Graduate students completing a thesis or dissertation are required to demonstrate their ability to select a specific problem or topic, to assemble pertinent and necessary data, to do original research, to organize ideas and data acceptably, and to prepare a written report in clear and effective English. This demonstration takes the form of an oral defense of the finished document. For some master's and specialist students completing a professional/scholarly paper or project an oral defense may be required. All members of the advisory committee must be present and may question the student.

The oral defense must be held at least three weeks before the last day of instruction in the term in which the student plans to complete the degree requirements. It may be conducted before that term only with the Graduate Dean's permission. Students must be enrolled during the term the oral defense is conducted.

Oral defenses and subsequent deliberations concerning the student are open to the UNLV Graduate Faculty members and administrators. Each advisory committee member and the Graduate Dean must approve the attendance of other individuals wishing to participate in any aspect of the oral defense.

During the oral defense, the student must be able to demonstrate a comprehensive understanding of a broad field of study and a detailed understanding of a more limited field. The advisory committee must unanimously pass the student. If the committee votes unanimously to fail the student or the vote is not unanimous to pass, the student, in consultation with his/her advisor, may request the committee to administer a second examination. The student must wait at least three months before taking the second examination. The department may require additional course work, substantial reworking of the thesis, dissertation, professional/scholarly paper or project or whatever is believed necessary to prepare the student for the second examination. The Graduate College will not approve third examination requests.

Advancement to Candidacy

The Graduate College designates the advancement to candidacy status for doctoral students only. Doctoral students are advanced to candidacy upon successful completion of all course work, passing the comprehensive examination, and completing the dissertation prospectus. The date of the advancement is recorded on the student's official UNLV transcript.

Graduation Procedures

Application for Graduation

Students are responsible for applying for graduation. The graduation application is available for downloading on the Graduate College web site at <http://graduatecollege.unlv.edu>. The application form must be signed and returned to the Graduate College by the deadline posted on the Graduate College website at <http://graduatecollege.unlv.edu>. Applications for graduation will not be processed unless all required forms and documents have been submitted to the Graduate College including degree program, and if required prospectus approval, appointment of advisory committee, and for doctoral students the advancement to candidacy.

If students do not complete the degree requirements in the term anticipated, it is expected that they will do so in the next regular term (summer excluded). A new application for graduation must be filed, and an additional diploma fee will be charged. In addition, students must be enrolled during the term they apply for and expect to graduate.

Granting of Degrees

Degrees are awarded three times a year in May, December, and August. Students must be enrolled during the term they intend to graduate. When students apply for graduation, the Graduate College reviews the degree program. The Graduate Dean certifies that they have met degree requirements and a recommendation is forwarded to the Board of Regents. If any requirement has not been met, the degree will not be awarded. If a degree is awarded in error, or if a degree is awarded and it is later discovered that the degree requirements were not met, or if fraudulent claims are later discovered, the degree will be revoked.

Commencement

Students may not participate in commencement prior to completion of degree requirements. Commencement is held twice a year in May and December. August graduates may participate in the commencement following the completion of degree requirements.

Credit Requirements

Residence Credit Requirement

Resident credit means any graduate course that is satisfactorily completed at UNLV, except credits earned by special examination or correspondence courses. Correspondence study, credit by special examination, or enrollment in another institution within the Nevada System of Higher Education does not constitute an interruption of resident credit.

A minimum of 50 percent of the total credits required to complete the master's, specialist, or doctoral degree not including transferred credits, the thesis, dissertation, or professional paper must be earned at UNLV after admission to a graduate degree program.

Graduate Credit

All courses numbered 600-799 are considered graduate level. To determine which graduate-level courses will apply to a specific degree, the student must have them approved on a degree program. Prior to having a degree program approved, there is no guarantee that a course will apply toward the degree. To be considered a graduate-level course, the instructor must be a member of the Graduate Faculty.

The Graduate College requires a minimum of 50 percent of the degree program semester hours be 700-level courses excluding thesis, dissertation, or professional/scholarly paper. Individual departments may require more than the Graduate College minimum.

Graduate-level courses may not be challenged. Graduate courses which are graded on a satisfactory/fail basis, may not be used in a graduate degree program except for thesis, dissertation, or professional/scholarly paper credits.

Credit Toward Degree

Courses used to fulfill requirements for one degree may not be used toward another degree. No more than three credits of a student's degree program may consist of UNLV workshop, institute, and conference credits, and the student must have received a grade for these credits.

A course in which a grade of less than C was received will not be considered for use toward the degree. Departments may impose a higher grade standard. Experimental, experiential (life and work experiences), correspondence, and audited courses may not be applied toward the degree. In addition, courses numbered in the 100-499 series cannot be used for graduate credit.

Credit may be used toward the graduate degree for courses taken while an undergraduate at UNLV only if the course was reserved for graduate credit. See the Admissions section for this information.

Transfer Credit Limitations—Prior to Admission and Enrollment

Not more than one-third of a student's degree program (not including the thesis, dissertation, or professional/scholarly paper) may be transferred from another university at the time admission is granted. Courses used to fulfill requirements for one degree may not be used to reduce credit hour requirements in another degree program.

For UNLV non-degree graduate students, a maximum of 15 graduate credits taken at UNLV may be applied toward a graduate degree program.

Transfer Credit Limitations—After Admission and Enrollment

Once admitted to an advanced degree program, students must obtain prior written consent of the department and the Graduate Dean to take course work elsewhere and use it in their degree program. Such work must be graduate level, graded, and must not be experimental, correspondence, or extended in nature.

The department chair, the graduate coordinator, the academic dean responsible for approving the student's degree program, and the Graduate Dean must approve all credits taken prior to admission or transfer credit. To be considered for use:

1. The work must have been taken at an accredited institution;
2. The work must have been completed with a grade of B or higher (B- is not acceptable);
3. Official transcripts covering the work must be sent directly from the issuing institution to the Graduate College; and
4. The work must be posted to the student's permanent academic record.

Transfer credit is approved only when evidence exists that the work is certifiably graduate level and has not been used in another degree program. The age of the transfer work under consideration, or the year taken, may also be a factor. The student is responsible for providing this evidence.

After admission, credits (workshops and correspondence courses will not be considered) taken at another institution may be applied toward the degree if prior permission is obtained. Contact the Graduate College for the request form, additional information and the conditions of transfer credits.

Limitation on Credit Load

The university considers a graduate student taking nine credits per semester as full-time (six credit hours if the student is a graduate assistant).

Graduate students normally may not take more than 12 credit hours (10 if a graduate assistant) during the fall and spring terms. They may take no more than six credit hours in a single five-week Summer Term and earn no more than a total of 12 credits during the Summer Term (pre, post, and regular five-week sessions combined). Overload petitions are available in the Graduate College office. Petitions must be approved by the Graduate Dean prior to registration.

Grade Point Average

A candidate for an advanced degree must have an overall grade point average of 3.00 for all graduate program approved courses. The GPA, computed by the Graduate College, includes all completed graduate course work accepted at admission and all subsequently approved course work.

Continuous Enrollment

After admission to a graduate program, students must register for a minimum of six semester hours each calendar year. Students working on a thesis or dissertation must register for three semester hours of credit each semester (excluding summer), until the document has been completed and has been given final approval. Students who have not registered for academic work within one calendar year will be separated from their program and must reapply for admission should they wish to continue. Exceptions to the above policy, as with a request for a leave of absence, are made only with the approval of the student's advisor, department chairperson or graduate coordinator, academic dean and the Graduate Dean. Any student using the services of the academic staff or university facilities must be registered for the period during which the services are rendered or the facilities are used. Students must be registered during the semester they intend to graduate and/or take final, comprehensive, preliminary, examinations, defend a thesis or dissertation.

Six-Year and Eight-Year Policy

The Six-Year and Eight-Year Policy applies to all course work, including all approved transfer degree course work. In special circumstances, the student's faculty advisory committee may recommend that the Graduate Dean extend these degree time limits. Each department may establish shorter periods than those previously discussed contingent upon the approval of the Graduate Dean and inclusion in the *Graduate Catalog*.

Students violating the six-year and eight-year policy and/or the continuous enrollment policy are no longer automatically eligible to complete their program under the requirements in place at the time of admission. This decision is left to the discretion of the department. Students are considered making satisfactory progress toward the degree as long as they are completing six degree program credits per calendar year. Students not meeting this requirement will be separated from the Graduate College.

Master's Degree Students: All master's degree requirements must be completed within six years. Course work completed more than six calendar years before the term in which all degree requirements are met may not be used in the degree program.

Doctoral Degree Students: A student beginning a doctoral degree program and holding a master's degree in an appropriate field of study must complete all doctoral degree program requirements within six years. A student beginning a doctoral degree program without a master's degree must complete all requirements for the degree within eight years.

Leave of Absence

When necessary a student may request approval for a leave of absence from a degree program. During the leave of absence, the student should remain in contact with the department. However, all degree requirements must be completed within the six- and/or eight-year policy as stated previously.

Probation and Separation

Departments are to review the academic performance of graduate students at the end of each semester and/or academic year. If a department determines that a student is not making satisfactory progress toward the degree, it may request the Graduate Dean separate the student from the college or place the student on probation. The department must provide the student with the specific requirements, including deadlines, which must be completed to be removed from probation. If the Graduate Dean approves the request, the student will be placed on probation. Failure to meet the conditions of the probation will result in separation from the Graduate College.

Failure to make satisfactory progress may include: failure to complete six credits per calendar year toward the degree program; unsatisfactory grades (including Incompletes, grades below a B or Withdrawals); failure to consult with the advisor when requested; failure to develop an official degree program; failure to establish the groundwork for an acceptable thesis; and failure of comprehensive and qualifying examinations. Students must prove that they are making satisfactory progress. Satisfactory academic progress

also involves maintaining the standards of academic and professional integrity expected in a particular discipline or program. Failure to maintain these standards may result in termination of the student's admission to a graduate degree program.

A UNLV graduate student who has been dismissed for academic reasons is not eligible for admission or re-entry. The student must petition the Graduate College for academic reinstatement.

Administrative Drops/Classroom Conduct

Failure to attend a course or to submit required work will result in a grade of F. The student who neglects a course is solely responsible for dropping the course or withdrawing from the university. However, an administrative drop may be initiated at the discretion of the instructor, who will record the circumstances. The approval of the academic dean offering the course is required. Deadlines for an administrative drop are the same as for a drop initiated by the student and are based on the date received at the Registrar's Office. The student will be notified by the final grade report.

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the right of other students to learn or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or other potentially disruptive activities, is permitted only with prior explicit consent of the instructor. The instructor may rescind permission anytime during the course.

If a student does not comply with requirements or obstructs the functioning of the class, the instructor may initiate an administrative drop. The instructor must record the circumstances. The approval of the dean of the college offering the course is required. Before a decision, the dean will consult with the student and other parties as appropriate. Serious cases of misconduct, as defined by the *Rules and Disciplinary Procedures for Members of the University Community*, will be referred to the appropriate administrative officer for action.

Change of Address

Any change of address should be reported immediately to the Registrar's Office and the Graduate College. Any correspondence from the university mailed to the last address provided by the student to the Registrar and Graduate College will discharge all university responsibility for notification.

Appeals and Procedures

Appeals are to request consideration of an admission decision, course grade, alleged unfair practice, and relief or waiver from a UNLV and/or Graduate College policy or requirement. Appeals must be filed with the Graduate College Office (FDH 309) in a timely manner. The Graduate College must receive grade appeals within 60 calendar days from the last day of the term/semester in question. The Registrar's Office must receive notification to change a grade due to clerical error within 60 calendar days from the last day of the term/semester. Each appeal is reviewed

individually and a decision will be based on the merits and documentation provided.

It is the student's responsibility to provide a clear and concisely written statement of the appeal and to provide all relevant documentation to be reviewed. Written appeals must include:

1. *UNLV Graduate College Appeal Form* as a cover sheet
2. Written Statement of Appeal addressed to the appropriate UNLV administrator
3. Relevant documentation and support. For example, documents may include medical records, work verification, police reports, death certificates, airline receipts, letters from professors on university letterhead, transcripts, etc. If the issue is not resolved between the student and course instructor, a written appeal should first be directed to the Graduate Coordinator of the department in question. If the problem remains unresolved to the student's satisfaction, appeals must be directed in progressive order to the Department Chair, College Dean, then subsequently to the Graduate Dean. The Graduate Dean may act to resolve the problem or request the Graduate College Student and Faculty Issues Committee to review the problem and make its recommendation to the Graduate Dean. The Graduate Dean will inform the student of the final decision.

Advisors and departments may have varying methods of processing appeals. Your department should be contacted for specific policies and procedures. The Graduate College Graduate Student and Faculty Issues Committee is the designated College Committee to hear certain graduate student and faculty appeals and is composed of graduate faculty and graduate student representatives.

Waiver of Regulations

The Graduate Dean will consider a student's written request for waiver of a regulation upon a written recommendation from the student's department and committee chair. The regulation in question must be specified and the reason for the exception clearly stated. The Graduate Dean will notify both the student and the department of the decision.

Policies and Procedures on the Protection of Research Subjects

Human Subjects: Graduate students conducting research must adhere to UNLV policies and procedures regarding the use of human subjects. All research projects in which human subjects are involved must be reviewed and approved under the authority of the UNLV Institutional Review Board (IRB), which consists of two committees - Biomedical Sciences Committee and Social and Behavioral Sciences Committee. The IRB is responsible for the development and monitoring of university policy and procedures involving the use of human subjects in research.

The provision for the protection of human subjects in research applies to all studies in all locations, whether funded or unfunded, and whether conducted by faculty, students, or staff. It also applies to persons unaffiliated with UNLV, who wish to investigate subjects under the protection of the

university. Students should contact the Office of Sponsored Programs to obtain appropriate forms and further information.

Animal Subjects: It is university policy that: 1) the proper care and management of laboratory animals is essential to the welfare of the animals, to the validity of research data, and to the health and safety of those caring for or using animals; and 2) the university will comply with federal and state regulations regarding animal welfare.

All animal protocols involving vertebrate animals (including farm animals and wild animals) conducted at, funded through or sponsored by UNLV must be submitted for prior Institutional Animal Care and Use Committee (IACUC) review and periodic review after approval in accordance with university policies and procedures that are required by federal law

The provision for the protection of animal subjects in research applies to all studies in all locations, whether funded or unfunded, and whether conducted by faculty, students, or staff. It also applies to all studies in all locations, whether funded or unfunded, and whether conducted by faculty, students, or staff. It also applies to persons unaffiliated with UNLV, who wish to investigate subjects under the protection of the university. Students should contact the office of Sponsored Programs to obtain appropriate forms and further information.

UNLV Student Computer Use Policy

Public computer laboratories and mainframe computers are provided as a service to students. Use is a privilege, not a right. Users should be good citizens; they must refrain from doing anything that annoys others or disrupts the educational experiences of their peers. Failure to comply with the regulations below may result in suspension under the NSHE Code, or civil or criminal action under the Nevada Revised Statutes or federal law. It is a violation of UNLV policy to:

- a. Copy any copyrighted software provided by UNLV. It is a criminal offense to copy any software protected by copyright, and UNLV will treat it as such.
- b. Use licensed software in a manner inconsistent with the licensing arrangement. Information on licenses is available at the tutor stations or through NSHE Computing Services.
- c. Copy, rename, alter, examine, or delete the files or programs of another person or UNLV without permission.
- d. Use a computer to annoy others, including, but not limited to, sending offensive messages or knowingly causing a system to crash.
- e. Create, disseminate or run a self-replicating program (virus), whether destructive in nature or not.
- f. Use a computer for non-university work, such as for a private business or non-UNLV sanctioned club.
- g. Tamper with switch settings or do anything that could damage terminals, computers, printers, or other equipment.
- h. Collect, read, or destroy output other than your own work without the permission of the owner.
- i. Use the computer account of another with or without permission unless it is designated group work.
- j. Use software in the lab not owned by UNLV unless the student is the legally licensed owner.
- k. Continue to use a computer account after withdrawing from the class for which it was obtained.
- l. Access or attempt to access a host computer, either at UNLV or through a network, without the owner's permission, and/or through use of log-in information belonging to another person.

Student Use of Hazardous Materials

Certain courses may require students to work with potentially hazardous materials in the lab, darkroom, or workshop. Instructors will provide instructions regarding the safe handling of all materials. Questions should be directed to the specific academic department or instructor.

Timeline from Admission to Graduation

STEPS	WHO	DEADLINES
Advisor Assigned	Department	Upon admission to Graduate College. (Selected by department from graduate faculty)
Select Advisory Committee	Degree Seeking Graduate and Certificate Students (when applicable)	No later than the last day of instruction of the first semester of enrollment and before establishing the degree or certificate program.
Submit Proposed Degree Program to Graduate College	Master's Degree and Certificate Students	Before completing 16 hours OR by the 6th week of the 1st semester of admission if 12+ hours (taken prior to admission) will be considered as part of the degree or certificate program.
	Doctoral Students	By the beginning of the 3rd semester of enrollment.
Submit Thesis, Dissertation or Professional Paper Prospectus Approval to Graduate College	Master's Degree Students (when applicable) Doctoral Degree Students	At the same time the degree program is submitted. At the same time the degree program is submitted and prior to advancing to candidacy.
Submit Advancement Candidacy Form to Graduate College	All Doctoral Degree Students	Not less than 1 semester/term prior to anticipated graduation. Generally all course work must be complete, the comprehensive examination is passed, and the prospectus is approved by the Graduate Dean.
Apply for Graduation	All Graduate Degree Students	The exact deadline is announced each semester in the UNLV Schedule of Classes.
Apply for Certificate Completion	All Graduate Certificate Students	The exact deadline is announced each semester in the UNLV Schedule of Classes.
Submit Thesis/ Dissertation for Initial Format Check	Graduate Degree Students Required to Complete a Thesis or Dissertation	Suggested Deadline: 8th week of the semester that graduation is anticipated.
Submit Thesis/ Dissertation Draft to Committee	Graduate Degree Students Required to Complete a Thesis or Dissertation	Suggested Deadline: 8th week of the semester that graduation is anticipated.
Completed Thesis/Dissertation To Committee	Graduate Degree Students Required to Complete a Thesis or Dissertation	A minimum of 1 week prior to thesis/dissertation defense.
Thesis/Dissertation Defense	Graduate Degree Students Required to Complete a Thesis or Dissertation	A minimum of 3 weeks prior to the last day of instruction of the term in which graduation is anticipated.
Submit Final Copies of Thesis/Dissertation to Graduate College	Graduate Degree Students Required to Complete a Thesis or Dissertation	A minimum of 2 weeks before the end of instruction of the term in which graduation is anticipated.
Submit Final Exam or Oral Defense Results to Graduate College	All Graduate Students	A minimum of 2 weeks before the end of instruction of the term in which graduation is anticipated.
Certificate Completion	All Graduate Certificate Students	Granted after all requirements are fulfilled.
Graduation	All Graduate Degree Students	Granted after all requirements are fulfilled.

College of Business

The College of Business offers four graduate programs: the Master of Business Administration (MBA), the Master of Science in Accountancy, the Master of Arts in Economics, and the Master of Science in Management Information Systems. The MBA and M.S. degrees are designed to prepare professionals for challenging careers in global management. The M.A. in Economics allows the students the option of mastering economic concepts for further graduate study at the Ph.D. level or for developing an expertise in applied and empirical economics. The largest graduate program in the college, the MBA, is designed to prepare the individual to meet the challenges of rapid change in business and in society through emphasis on managerial concepts and analytical reasoning. The particular focus on theory and practice produces special qualities in the UNLV MBA graduate. By studying managerial theory and economic principles, the student acquires the capacity for assuming responsibility in a wide variety of specific assignments within an organization.

Richard E. Flaherty, Dean

Accounting

Chair

Tandy, Paulette R. (1989), Associate Professor; B.S., Appalachian State University; MBA, Ph.D., Texas A&M; CPA, North Carolina.

Graduate Coordinator

Charron, Kimberly (1997), Associate Professor; B.S., Ph.D., University of Arizona; CMA.

Graduate Faculty

Beck, Grant (2004), Assistant Professor; B.S. Rockhurst College; M.A.S., University of Illinois; Ph.D., University of Missouri-Columbia; CPA, Missouri.

Cocco, Anthony F. (1991), Associate Professor; B.S., Villanova University; Ph.D., Florida State University, CPA Pennsylvania.

Flaherty, Richard (1999), Professor and Dean; B.A., M.S., Ph.D. University of Kansas.

Koo, Meihua (2001), Assistant Professor; B.A., National Chung-Hsing University; MBA, University of Rochester; Ph.D., Oklahoma State University.

McCaslin, Thomas E. (1988), Associate Professor; B.B.A., University of Houston; M.A., D.B.A., University of Tennessee; CPA, Texas.

Moore, Charles T. (1989), Professor; B.S., University of Arkansas at Little Rock; M.S., Ph.D., Louisiana State University; CPA, Texas.

Smedley, Georgia Ann (1999), Assistant Professor; B.A., Mesa State College; M.S., University of Arkansas; Ph.D., Oklahoma State University.

Swayze, James P. (1990), Associate Professor; B.B.A., University of North Texas; M.S., Ph.D., University of Houston.

Vent, Glen A. (1982), Associate Professor; B.S., MBA, Central State University; B.S., Washington State University; Ph.D., University of Arizona; CPA, Oklahoma.

Zimmerman, John (1989), Associate Professor; B.S., Glassboro State College; M.S., Golden Gate University; J.D., Southwestern University School of Law; CPA, California and New Jersey.

Professors Emeriti

Baldwin, Duane E. (1975-1996), Emeritus Professor; B.S., M.A., San Jose State University; D.B.A., University of Southern California; C.P.A., Nevada, Utah.

Bakay, Virginia H. (1978-2000), Emeritus Associate Professor; B.B.A., Memphis State University; M.A., Ph.D., University of Alabama; C.P.A., Tennessee.

Clary, Duane A. (1973-1996), Emeritus Professor; B.S., Central State University; L.L.B., MBA, University of Oklahoma; D.B.A., Texas Tech University; C.P.A., Oklahoma.

Milne, Ronald A. (1983-2000), Emeritus Associate Professor; B.S., Arizona State University; MBA, Michigan State University; Ph.D., University of Illinois.

Neumann, Reuben (1962-1993), Emeritus Professor; B.S., Jamestown College; M.S., University of North Dakota; Ph.D., Arizona State University; C.P.A., Nevada, North Dakota.

The Master of Science in Accountancy is a professional degree designed to enhance the skills of those planning careers in accounting. The program of study includes training in advanced accounting topics such as auditing, financial accounting, accounting systems, and taxation.

The Master of Science in Accountancy requires a minimum of 30 credit hours above the bachelor's degree. The A.A.C.S.B - International Association for Management Education accredits the Master of Science in Accountancy. The Nevada State Board of Accountancy requires 150 hours of college credits from a college or university approved by the State Board of Accountancy. In combination with an undergraduate degree, the 30 hours required by the M.S. in the Accountancy program should satisfy these requirements.

Admission Requirements

Each student must satisfy the following requirements for admission into the Master of Science in Accountancy:

1. A bachelor's degree from an accredited college or university.
2. A minimum GPA of 3.00 or higher on a 4.00 scale.
3. A minimum GMAT score of 500 and a minimum score in the 25th percentile or higher on Verbal and a minimum score in the 25th percentile or higher on Quantitative.
4. Compliance with the Graduate College admission standards.

Degree Requirements

The student and the department graduate program coordinator will design each degree program. Students seeking a Master of Science in Accountancy must comply with all general university requirements as outlined in the *Graduate Catalog*. In addition, the following specific requirements must be satisfied.

Standard Program

All students must complete a minimum of 30 graduate credit hours, including at least 24 credit hours in 700-level courses. These courses must include the following:

1. A minimum of 18 graduate credit hours in accounting, 15 of which must be at the 700 level.

If the Professional Accountancy track is selected, these courses must include four of the following:

- *ACC 701 Federal Tax Topics
- *ACC 702 Financial Reporting Topics
- *ACC 706 Auditing Theory and Application
- ACC 709 Systems Theory and Application
- ACC 725 Mergers, Acquisitions and Divestitures
- ACC 795 Current Issues in Financial Reporting
- *Highly recommended for students planning to sit for the CPA Exam.

If the Federal Taxation track is selected, these courses must include:

- ACC 703 Issues in Federal Taxation
- ACC 705 Research Methodology in Federal Taxation
- ACC 740 Taxation of Corporations and Shareholders
- ACC 745 Taxation of Partnerships

2. A minimum of nine graduate credit hours outside the accounting discipline. These courses must be beyond the usual College of Business Core.
3. Three additional graduate credit hours.

Additional Program Requirements for a Student Holding a Non-Accounting Baccalaureate

A student who holds a bachelor's degree in a non-accounting field must satisfy the following accounting background core requirement.

- ACC 301 Accounting Environment
- ACC 601 Financial Reporting I (ACC 401)
- ACC 602 Financial Reporting II (ACC 402)
- ACC 609 Accounting Information Systems (ACC 409)
- ACC 610 Federal Taxation (ACC 410)
- ACC 670 Auditing and Assurance Services (ACC 470)

Some or all of the background core may be satisfied before a student is admitted into the M.S. program. In that situation the classes listed in parentheses (or equivalent) are considered acceptable substitutes when completed with a grade of B or better. If a core accounting course is not completed before a student is admitted into the M.S. program, the course must be taken at the 600 level, with the exception of ACC 301.

Additional Program Requirements for a Student Holding Non-Business Baccalaureate

A student who holds a non-business bachelor's degree must satisfactorily complete the following additional general business core course requirements:

- ACC 201 Financial Accounting
- ACC 202 Managerial Accounting
- BLW 273 Business Law I
- FIN 301 Principles of Managerial Finance

Some or all of the background business core may be completed before admission into the M.S. program.

Program Modifications

The Graduate Coordinator and Department Chair must approve exceptions or modifications of above program and requirements.

Accounting

ACC 701 Federal Tax Topics 3 credits

Advanced tax topics that impact business decisions involving corporations, pass-through entities, proprietorships and individuals. Credit only given to students on the Professional Accounting track. Prerequisite: ACC 410 or ACC 610 or equivalent.

ACC 702 **3 credits**

Financial Reporting Topics

Advanced accounting principles, theory, and practice used in the preparation, interpretation, and analysis of general purpose financial statements for external users. Prerequisites: ACC 402 or ACC 602 or equivalent.

ACC 703 **3 credits**

Issues in Federal Taxation

Impact of federal taxes on management decisions, with emphasis on income taxes. Prerequisite: ACC 410 or ACC 610 or equivalent.

ACC 705 **3 credits**

Research Methodology in Federal Taxation and Practice Before the IRS

Federal tax research methodology as related to practical problem solving in the areas of accounting practice and administrative tax procedures before the Internal Revenue Service and the United States Tax Court. Prerequisites: ACC 410 or ACC 610 or equivalent.

ACC 706 **3 credits**

Auditing Theory and Applications

Examination of the changing business environment of the auditor and the impact of these changes on auditing philosophy, objectives, and methodology. Contemporary issues in auditing examined. Prerequisite: ACC 470 or ACC 670 or equivalent.

ACC 709 **3 credits**

Systems Theory and Applications

Study of the methods, theories, and considerations of computer-based accounting applications. Class presentation, term project and case study required. Prerequisite: ACC 409 or ACC 609 or equivalent.

ACC 715 **3 credits**

Advanced Management Accounting

In-depth program covering the most topical areas of management accounting. Includes transfer pricing, advanced cost behavior analysis, cost-volume-profit analysis in a complex environment, cost allocation, advanced statistical cost variance investigation models, budgeting and control, and other contemporary topics. Prerequisite: Consent of instructor.

ACC 725 **3 credits**

Mergers, Acquisitions and Divestitures

Accounting concepts, practices, and procedures involved in accounting for business combinations, multinational-national corporations, and divestitures. Prerequisites: ACC 401 or ACC 601 or equivalent.

ACC 740 **3 credits**

Taxation of Corporations and Shareholders

Federal income tax problems of corporations and shareholders including organization, capital structure, distributions, undistributed income, stock redemptions and partial liquidations. Prerequisite: ACC 410 or ACC 610 or consent of instructor.

ACC 745 **3 credits**

Taxation of Partnerships

Tax considerations of organization and operation of partnerships. Partnership distributions, withdrawal of partners, problems upon death of a partner, dissolution of partnership, and sale of an interest. Prerequisite: ACC 410 or ACC 610 or consent of instructor.

ACC 749 **3 credits**

Seminar in Estate Planning

Estate and gift taxation with consideration of estate planning devices, generation skipping transfer tax, marital deduction and liquidity problems. Prerequisite: ACC 410 or ACC 610 or equivalent.

ACC 752 **3 credits**

Federal Income Taxation of Real Estate

Study of all types of real estate transactions with emphasis on planning in order to accurately identify the right treatment and provide possible tax-saving alternatives. Prerequisite: ACC 410 or ACC 610 or equivalent.

ACC 789 **3 credits**

Seminar in Accounting

Study in specialized areas of accounting. May be repeated to a maximum of six credits. Prerequisite: ACC 402 or ACC 602 or consent of instructor.

ACC 791 **1-6 credits**

Professional Paper

ACC 795 **3 credits**

Issues in Financial Reporting

Critical analysis of generally accepted accounting theories and principles with special emphasis on the examination of controversial areas. Prerequisite: ACC 402 or ACC 602 or consent of instructor.

ACC 799 **3-6 credits**

Thesis

May be repeated, but only six credits will be applied to the student's program. S/F grading only.

The following undergraduate courses have been approved for use in graduate programs. Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the UNLV Undergraduate Catalog under the corresponding 400 number. Credit at the 600-level normally requires additional work.

- ACC 601 Financial Reporting I
- ACC 602 Financial Reporting II
- ACC 605 Cost Management and Control
- ACC 606 Auditing in the Gaming Industry
- ACC 607 Governmental and Not-for-Profit Accounting
- ACC 609 Accounting Information Systems
- ACC 610 Federal Taxation
- ACC 620 Internal Auditing
- ACC 650 International Accounting
- ACC 670 Auditing and Assurance Services
- BLW 674 Business Law II

Business Administration

Director

Chatfield, Robert E. (1988), Professor; B.A., Eastern Nazarene College; M.S., Ph.D., Purdue University.

Graduate Faculty

Aalberts, Robert J. (1991), Leid Professor; B.A., Bemidji State University; M.A., University of Missouri; J.D., Loyola University.
Alder, G. Stoney (2002), Assistant Professor, B.S., University of Utah; MBA, Brigham Young University; Ph.D. University of Colorado.
Arend, Richard J. (2001), Assistant Professor: B.A., University of British Columbia; M.A., Ph.D., York University.
Brookman, Jeffery (2001), Assistant professor; B.S., University of Utah; M.A., Ph.D., University of Oregon.
Chang, Saeyoung (1999), Associate Professor; B. Commerce, University of Calgary; MBA, Indiana University; Ph.D., Ohio State University.
Choi, Seungmook (1991), Professor; B.A., Korea University; M.A., Ph.D., University of Texas, Austin.
Claurette, Terrence M. (1988), Professor; B.A., Stonehill College; Ph.D., Washington State University.
Corney, William J. (1976), Professor; B.S.E.E., University of Michigan; MBA, Eastern Michigan University; D.B.A., Arizona State University.
Cross, James (1989), Associate Professor; B.S., MBA, Ph.D., University of Minnesota.
Gilbert, Joseph T. (1991), Associate Professor; B.A., M.A., St. Louis University; Ph.D., University of Southern California.
Guidice, Rebecca (2004), Assistant Professor, B.A., Whitworth College; MBA, Eastern Washington University; Ph.D., Washington State University.
Hames, David S. (1989), Associate Professor; B.A., Albion College; M.A., Michigan State University; Ph.D., University of North Carolina, Chapel Hill.
Hoyt, Richard W. (1973), Professor; B.A., MBA, California State University, Long Beach; Ph.D., University of Arkansas.
Hsu, Chin-Chun (2003), Assistant Professor; B.S., Tamking University; MBA, California State University, San Bernardino; Ph.D. Candidate, Saint Louis University.
Jameson, Melvin H. (1989), Professor; S.B., Massachusetts Institute of Technology; M.A., Ph.D., University of California, Berkeley.
Lapidus, Richard (1991), Associate Professor; B.S., Indiana University; M.S., University of California, Long Beach; Ph.D., University of Nebraska, Lincoln.
LaTour, Michael S. (2004), Professor; B.B.A., MBA, Boise State University; Ph.D., University of Mississippi.
Lee, Ruby (2003), Assistant Professor; B.S.W., MP, University of Hong Kong; Ph.D., Washington State University.
Leong, Keong (2001), Professor, B.S., University of Malaysia; M.B.A., University of South Carolina; Ph.D., University of South Carolina.
Mantecon, Tomas (2001), Assistant Professor: B.A., University of Oviedo, Spain; M.A., Icade University, Spain; M.A. American Graduate School of International Management; Ph.D., Louisiana State University & Agri & Mech & Hebert Laws Center.
McAllister, Daniel W. (1982), Associate Professor; B.S., MBA, University of Utah; Ph.D., University of Washington.
Mejza, Michael (1998), Associate Professor; B.A., University of Connecticut; MBA, Ph.D., University of Maryland.

Miller, Alan N. (1978), Professor; B.A., University of New Hampshire; B.A., Temple University; MBA, Syracuse University; M.Phil., Ph.D., City University of New York.
Naylor, Gillian (1996), Associate Professor; B.A., Washington State University; MBA, Eastern Washington State University; Ph.D., University of Arizona.
Nill, Alexander (1999), Associate Professor; M.A., Ludwig-Maximilian-University; D.B.A., Ph.D., University of Innsbruck.
Phelan, Steven (2003), Assistant Professor, B.S., University of Melbourne; Ph.D. (ABD), Australian Graduate School of Management; M.B.A., Monash University, Ph.D., La Trobe University.
Poon, Percy (1989), Associate Professor; Honors Diploma, Hong Kong Baptist College; MBA, Southwest Texas State University; Ph.D., Louisiana State University.
Richards, Clinton H. (1977), Associate Professor; B.S., MBA, Ph.D., University of Kansas.
Runge, Janet (1997), Assistant Professor; B.P.A., Loyola University; MBA, University of New Orleans; Ph.D., Louisiana State University.
Schibrowsky, John (1988), Professor; B.S., University of Wisconsin-Superior; MBA, University of Northern Iowa; Ph.D., University of Wisconsin-Madison.
Seale, Darryl Anthony (1999), Associate Professor; B.S., California State University, Chico; MBA, Pennsylvania State University; M.A., Ph.D., University of Arizona.
Sullivan Michael J. (1991), Professor; B.S., St. John Fisher College; MBA, University of Florida; Ph.D., Florida State University.
Tan, Keah-Choon (1998), Associate Professor; B.S., MBA, University of South Alabama; Ph.D., Michigan State University.
Thistle, Paul D. (1999), Professor; B.B.A., University of Portland; M.S., Ph.D., Texas A & M University.
Wisner, Joel D. (1991), Professor; B.S., New Mexico State University; MBA, West Texas State University; Ph.D., Arizona State University.

Professors Emeriti

Dandurand, Lawrence (1973), Professor; B.S.B., University of Minnesota; M.A., Mankato State College; Ph.D., University of Missouri.
Newbould, Gerald D. (1988), Professor; B.Com., University of Birmingham; M.A., University of Sheffield; Ph.D., University of Liverpool.
Pinney, J. Kent (1973-1998), Emeritus Professor; B.A., University of Utah; MBA, D.B.A., Indiana University.
Seidman, Lorne H. (1969-2000), Emeritus Professor; B.S.C., Ohio University; J.D., Case Western Reserve University.
Yantis, Betty L. (1975-1998), Emeritus Professor; B.S.C.E., M.S.C.E., M.A., Ph.D., University of Arkansas.

The College of Business offers the following MBA programs:

Master of Business Administration - Regular
Dual MBA and M.S. in Hotel Administration
Dual degree in Dental Medicine and Master of Business Administration (DMD/MBA)
Dual degree in Jurist Doctorate and Master of Business Administration (JD/MBA)
Master of Business Administration – Executive (EMBA)

All programs offered by the College of Business at UNLV are accredited by AACSB -- The Association to Advance Collegiate Schools of Business.

The Master of Business Administration - Regular

The MBA programs at the College of Business at UNLV are designed for those who seek global career and leadership opportunities. Today's business leaders face challenges which are quite different from those of a generation ago. Faced with a global competitive business environment and supported by new information and communication technologies, organizational structures are changing. Success in the new marketplace requires teams of executives working across functions and across borders.

The MBA programs at UNLV prepare students to succeed in today's business environment by providing them with the needed skills, knowledge, and tools to become visionary and creative leaders. The program focuses on ethics and critical thinking, business communications, the role of the firm and its goals and markets, firms' strategic planning and positioning, value chain management approach, international business culture, technology management, integration of curriculum, and teamwork. Our faculty and administration are committed to fulfilling the recently revised college mission: to advance the knowledge and practice of the disciplines that constitute business and administration and to foster the intellectual and economic vitality of Nevada and the Intermountain Region through teaching, research, and outreach. Our faculty are committed to continuous quality improvement of the curriculum and teaching, to increased vertical and horizontal integration of course material, and to team teaching and team learning. To achieve the best outcome, the faculty embrace no single teaching method, but rather employ a combination of methods best suited to the particular objectives of the course. Lectures, group discussions, seminars, case studies, computer simulations, and individual and group research projects are frequently used within courses and across the curriculum.

MBA Program Highlights

- A holistic approach to business management which starts with the role of the firm, its goals and markets, its strategic planning and positioning, and value chain management.
- Curriculum allows students to think actively about connections among disciplines by emphasizing key functional areas in integrative course modules and team teaching across disciplines.
- Explicit emphasis on a framework for analysis of ethical issues and critical thinking.

- A greater emphasis on international studies through a specific course in international business and cross-cultural perspective and a greater internationalization of other courses.
- Accommodating the needs of both full-time and part-time students by allowing students to complete their degree at a pace that fits their personal schedule.
- A 15-hour concentration with up to six hours of electives provides the opportunity of in-depth specialization and a greater flexibility in tailoring programs of study to each student's needs and interests.

Admission

The College of Business MBA Program welcomes applications from college graduates in all disciplines. Applicants must hold a bachelor's degree from an accredited college or university. Graduates from all majors are encouraged to apply. Applicants are evaluated based upon academic ability, as evidenced by a strong undergraduate record, performance on the Graduate Management Admission Test (GMAT), maturity, motivation, leadership, communication skills, and interest in professional management. Applicants should have a record of proven scholastic capability and possess the interest and ability to assume business leadership responsibilities.

The Application Process

Admission to the graduate business program is conducted by the MBA Programs and the UNLV Graduate College. Please note that the responsibility of obtaining and submitting the application material, transcripts, test scores and other necessary information rests upon the applicant. The Graduate College requires the following documentation:

1. Completed "Application for Admission."
2. Official transcripts of all college-level course work previously taken and evidence of having been awarded the equivalent of a U.S. bachelor's degree.
3. Where applicable, international students must also have the results of the TOEFL test sent to the Graduate College office.

The documents listed above are to be mailed to:
Graduate College
University of Nevada, Las Vegas
4505 Maryland Parkway • Box 451017
Las Vegas, NV 89154-1017

In addition, the MBA Program requires the following documentation.

1. Official transcripts of college-level course work taken, (this is a second set of transcripts, the first set goes to the Graduate College office and the second set to the MBA office). The applicant must obtain a full set of official transcripts and have them mailed (unopened) directly to the MBA office.
2. Official results of the GMAT test; the report is to be sent directly from the GMAT testing center to the MBA Program.
3. A copy of the applicant's current resume.

4. Two letters of recommendation from persons competent to judge the applicant's potential to pursue graduate work successfully.
5. A brief statement of purpose.
6. Evidence of a minimum of two years of relevant work experience preferred.

The documents listed above are to be mailed to:
 College of Business MBA Programs
 University of Nevada, Las Vegas
 4505 Maryland Parkway • Box 456031
 Las Vegas, NV 89154-6031

Admission requirements include:

1. Evidence (official transcript) of an undergraduate Grade Point Average (GPA) of 3.00, or higher, on a four-point scale.
2. Graduate Management Admission Test (GMAT) score of 550 or higher. The test score should be reflective of both general, verbal, and quantitative aptitude. GMAT scores over five years old are not accepted. The average score of accepted students over the last two years is about 600, with each component over the 25th percentile. The computer adaptive GMAT is offered on a continuous basis by appointment at one of approximately 400 locations throughout North America. For further information contact:

Graduate Management Admission Test
 1600 Tysons Blvd. Ste. 1400
 McLean, VA 22102
 (703) 749-0131
 web site: www.mba.com
 email: webmaster@gmac.com

3. International students must score a 550 or higher (paper-based) or 213 or higher (computer-based) on the TOEFL (Test of English as a Second Language) exam.

Applicants with demonstrated potential, a strong undergraduate academic record, and a strong GMAT score, are admitted with graduate standing. Admission to graduate standing permits the student to be assigned to an MBA advisor and to plan a program of study leading to the MBA degree. Students whose undergraduate academic record and/or GMAT score are not strong to be considered for graduate standing may be considered for provisional admission. Applicants with a GPA less than 3.00 but not lower than 2.75, OR a GMAT score less than 550 but not lower than 520, might be considered for provisional admission provided that the result of the GPA times 200 plus the GMAT score is not less than 1,150. A graduate provisional student must complete nine credit hours of required course work. The courses are approved in advance and are listed on the "Letter of Admission." The student must complete this course work within the first two consecutive enrollment periods (excluding Summer Term) and earn individual grades of B (3.00) or above before any other additional course work may be taken. Failure to complete this course work in the allotted time, or any grades less than B, will result in cancellation of

the student's admission. Upon completion of the nine hours with grades of B or better, the College of Business will recommend to the Graduate College that the student be given graduate standing status. The Graduate College will then change the student's status to graduate standing. All entering students are required to have competency in two areas. First, the applicant must be skilled in the use of word processing and spreadsheet programs. Second, the applicant must possess strong mathematical skills through college algebra. It is the applicant's responsibility to provide satisfactory evidence of these skills. Prior to their first semester in the program, all admitted students are required to attend a noncredit orientation and skill refresher. This will include sessions on team building, basic computer skills, research facilities, time management, etc.

Accelerated MBA Program

To be considered for the accelerated MBA program a candidate must meet each of the following requirements:

1. GMAT score greater than or equal to 600
2. GMAT verbal score greater than or equal to the 50th percentile
3. GMAT quantitative score greater than or equal to the 50th percentile
4. A business undergraduate degree from an AACSB accredited university

If the above requirements are met, then it is possible to waive some of the core classes from the MBA curriculum. Classes can be waived based upon undergraduate business classes taken if your business degree was granted in the last five years and a grade of B or better was earned in the relevant class. Classes can also be waived if you currently are working in a relevant field and you satisfy the above 4 requirements. A maximum of 6 classes (18 credit hours) can be waived. Thus a student must take a minimum of 30 credit hours to earn a MBA degree. All class waivers must be approved by the Director of MBA Programs. The following classes can possibly be waived based upon successful completion of the undergraduate classes listed in parenthesis or their equivalents:

- MBA 702 Statistical Analysis (ECO 262 or equivalent)
- MBA 707 Organizational Behavior (MGT 492 or equivalent)
- MBA 709 Accounting Management (ACC 201 and ACC 202 or equivalents)
- MBA 710 Applied Economic Analysis (ECO 302 or equivalent)
- MBA 711 Financial Management (FIN 301 or equivalent)
- MBA 715 Market Opportunity Analysis (MKT 472 or MKT 495 or equivalent)
- MBA 720 Supply Chain Management (SCM 473 or equivalent)
- MBA 735 International Business and Cross-Cultural Perspectives (A general International Business class)

Graduate Non-Degree Seeking Students

Students who have begun the admission process for the MBA program may be considered for taking courses as a non-degree seeking student before being admitted to the program. Students must have a current application for admission on file and satisfy the minimum admission requirements for the upcoming semester. Students must receive the approval of the Director of MBA programs before enrolling in graduate courses offered by the College of Business. Approval may be granted for one semester only and for a maximum of six credit hours. Approval is restricted to the courses in the first half of the MBA core.

Transfer Credit and Prior Course Work

A maximum of six credit hours of courses taken prior to admission to the program may be applied towards the MBA degree requirement. This includes all courses taken as a fully admitted graduate student at an AACSB accredited business school or as a non-admitted student at UNLV. Graduate work below a B (3.00) or work taken pass/fail is not transferable toward the MBA degree. Requests for transfer course work must be evaluated and approved by the Director of MBA Programs after the student is officially admitted.

Probation and Suspension

Student academic performance is reviewed twice a year. Admitted students must enroll for courses every semester, excluding Summer Term, and must complete at least 6 credit hours every year. Prior approval from the Director of MBA Programs is required if a student plans to take a leave of absence for a semester. If it is determined that a student is not making satisfactory progress toward meeting degree requirements or if the student's overall GPA falls below 3.00, the student will be placed on probation. Conditions and deadlines for the removal of probation will be specified. Failure to meet the conditions will result in separation from the MBA program.

Degree Requirement

The MBA degree requires a minimum of 48 credit hours of approved course work, including the completion of the 30 credit hours of the Core Courses, three credit hours of Capstone, and 15 credit hours in the student's concentration area.

1. Core Courses **30 credits**

All core courses have prerequisites of admission to the MBA program. With prior written approval, non-admitted students may take up to 6 credit hours from MBA 702, 705, 706, and 710. All core courses are sequenced so students may acquire the tools and skills they need for success in their concentration areas.

MBA 702	Statistical Analysis	3 credits
MBA 706	Laws, Regulations, and Ethical Issues	3 credits
MBA 707	Organizational Behavior	3 credits
MBA 709	Accounting for Managers	3 credits
MBA 710	Applied Economic Analysis	3 credits

MBA 711	Managerial Finance	3 credits
MBA 715	Market Opportunity Analysis	3 credits
MBA 720	Supply Chain Management	3 credits
MBA 730	Information Systems for Management	3 credits
MBA 735	International Business and Cross Cultural Perspectives	3 credits

2. Concentration **15 credits**

The 9-12 hours, depending on the concentration, of required courses must be taken in the concentration area of the student's choice. The remaining 3-6 credit hours can be taken from the list of the elective courses or from the remaining two concentration courses. The concentration areas and all related course work require prior approval of the Director of MBA Programs.

Capstone Course

MBA 795 Strategy Formation Processes **3 credits**

In addition, for students without relevant business work experience, MBA 741, MBA Internship, is required. At the student's request and with a proof of relevant work experience, this requirement may be waived.

List and Description of Concentrations

- Finance
- Management Information Systems
- New Venture Management
- Services Marketing

Finance

This concentration provides the student with a working knowledge of financial management in solving the practical financial problems encountered in the management of the financial affairs of the firm. Typically, it involves decision problems associated with working capital, capital structure, capital budgeting, mergers, acquisitions and corporate restructuring. It also seeks to expand the student's understanding of the current conceptual framework of investments in financial assets including stocks, bonds and derivative securities.

Required courses:

- FIN 708 Advanced Corporate Finance
- FIN 710 Investments Management
- FIN 712 Financial Markets and Institutions
- Plus two Elective Courses*

Services Marketing

This concentration is designed to provide students with the skills and tools necessary to successfully market services, products, and ideas for profit and not-for-profit firms. The courses have been designed to provide students with state of the art information for marketing in today's changing environment. A marketing concentration can be valuable to a wide range of people including professional managers, not-for-profit employees, professionals, and small business owners. Key topics include: competitive advantage, segmentation, relationship development, and competitive positioning.

Required courses:

MKT 711 Strategic Marketing Management
MKT 720 Customer Satisfaction and Service
Quality Management
MKT 777 Services Marketing
Plus two Elective Courses

New Venture Management

This concentration is designed to prepare students for the prospects of managing new ventures. Courses required for this concentration develop student skills in the following areas critical to new venture success: opportunity creation recognition, evaluation and exploitation; resource gathering and leveraging through preemption, negotiation and incentivizing; and, management of uncertainties through intelligence gathering, planning and adaptation to change. Whether the student eventually becomes an independent entrepreneur or corporate project manager or venture capitalist, he or she will have a greater ability to address the challenges that contemporary businesses have in creating new value and sustaining it.

Required courses:

MGT 710 Managing Entrepreneurial Organizations
MGT 711 Seminar in Negotiation
MGT 712 Change Management
Plus two Elective courses

Management Information Systems

This concentration is designed to prepare students for challenges and opportunities of information technology management. Courses for this concentration are developed to cover tools, concepts, and methodologies for preparing students to become effective MIS managers and be able to use the technology in innovative ways that create competitive advantage. The program will cover: computer software as applied in business processes; systems analysis and design; database concepts; strategies for corporate information systems; information systems project management; social and economic impacts of information technology; data communications and networks; electronic commerce; and security. Pedagogy involves lectures, labs, discussions, and selected readings and cases.

Required courses:

MIS 744 Information System Planning and Strategy
MIS 746 Information Systems Project Management
MIS 762 Systems Analysis, Modeling and Design
and either of
MIS 740 Software Concepts
MIS 766 Data Management
Plus one Elective Course

Elective Courses

FIN 715 Portfolio Management
MGT 710 Management of Entrepreneurial Organization
MGT 711 Seminar in Negotiation
MGT 712 Change Management

MIS 752 Advanced Topics in MIS
MKT 737 New Service and Product Development
MKT 757 Strategic Database Marketing

MBA Core

MBA 702 Statistical Analysis **3 credits**

Intensive seminar/workshop applying statistical analysis to topics and problems encountered by business managers. Presumes no previous exposure to statistics but moves rapidly to the mastery of statistical analysis tools available on spreadsheet software. Topics include descriptive statistics, hypothesis testing, analysis of variance, simple regression and multiple regression. Prerequisite: Admission to MBA Program or approval of the Director of MBA Programs.

MBA 706 Law, Regulations and Ethical Issues **3 credits**

Deals with legal, regulatory and ethical environments of business. Provides foundation for recognizing and analyzing legal and ethical issues facing managers. Case studies applying both legal and ethical analysis featured. Prerequisites: Admission to MBA Program or approval of the Director of MBA Programs.

MBA 707 Organizational Behavior **3 credit**

Overview of research and theory on organizational behavior with emphasis on the skills required for managerial effectiveness in modern complex organizations including motivating and leading employees, developing effective teams, and managerial communication responsibilities. Prerequisites: Admission to MBA Program or approval of the Director of MBA Programs.

MBA 709 Accounting for Managers **3 credits**

Fundamentals of financial and managerial accounting. Topics include accounting's conceptual framework, preparation and analysis of financial statements, current topics in financial reporting, ethical and legal responsibilities in financial reporting, cost-volume-profit analysis, tactical decision making, budgeting and accounting for management control. Prerequisites: Admission to MBA Program or approval of the Director of MBA Programs.

MBA 710 Applied Economic Analysis **3 credits**

Intensive application of the principles of microeconomic theory to business management problems. Presumes no previous knowledge of economics but moves rapidly to a thorough understanding of the tools of price theory. Topics include scarcity, choice, supply, demand, production, cost, competition, monopoly, present value and decision-making under risk. Prerequisite: Admission to MBA Program or approval of the Director of MBA Programs.

MBA 711 **3 credits**
Managerial Finance
Focuses on corporate financial management, including cash flow planning, capital budgeting, security valuation, and financing decisions. Includes the concepts of market efficiency and optimal capital structure. Provides useful set of tools to improve the efficiency of business and personal financial decisions. Prerequisites: MBA 709, admission to M.B.A. program, or approval of the Director of MBA Programs.

MBA 715 **3 credits**
Market Opportunity Analysis
Theory and practice of marketing fundamentals applied to the market opportunity analysis. Focus on the marketing concept, planning, internal analysis, industry analysis, customer analysis, segmentation, competitive strategies and strategy formulation, product and pricing decision, positioning, forecasting, and profitability of opportunities. Prerequisites: Admission to the MBA program or approval of the Director of MBA Programs.

MBA 720 **3 credits**
Supply Chain Management
Study of the integration of the key value-adding activities across a network of firms that produce raw materials, transform them into intermediate and then end products, and finally distribute these to end users. Topics include purchasing and supplier relationships, inventory and quality management, distribution, customer relationship management, service response logistics, and future trends in supply chain management. Prerequisites: MBA 702, 709, 710, 711 or approval of the Director of MBA Programs.

MBA 730 **3 credits**
Information Systems for Management
Overview of contemporary information systems and technology issues. Technical, behavioral, organizational and competitive perspectives reviewed. Issues related to impact of information systems on organizational processes and work practices. Information systems strategies, technology implementation and systems analysis and design. Prerequisites: MBA 702, 709, 710, 711, or admission to the MSIS program or approval of the Director of MBA Programs.

MBA 735 **3 credits**
International Business and Cross Cultural Perspectives
Problems and opportunities of business in a global context. Examines economic, institutional, cultural, and legal issues faced by companies involved in international business and analyzes their effect on business decisions including: product design, production and marketing, human resources strategy, investment analysis, financial strategy, and risk management. Prerequisites: MBA 702, 709, 710, 711, or approval of the Director of MBA Programs.

MBA 741 **3 credits**
Internship
Supervised practical experience with a participating local enterprise or government agency, culminating in a written report. Prerequisite: Completion of MBA Core Curriculum and approval of the Director of MBA Programs, minimum GPA 3.0.

MBA 795 **3 credits**
Strategy Formation Processes
Integrates knowledge from specialized functional courses into a CEO perspective. Moves beyond a repertoire of generic strategies toward the formation of unique, firm-specific strategies. Builds effective strategies in complex organizational contexts. Prerequisites: To be taken during the student's final semester.

Concentration and Elective Courses

FIN 708 **3 credits**
Advance Corporate Finance
Studies major decision-making areas of managerial finance and some selected topics in financial theory. Emphasis on the application of the theory and practice of business asset management, financing choice, capital structure, cost of capital, and dividend policy. Current topics, such as corporate acquisitions, restructuring, and underwriting covered as appropriate. Prerequisites: Completion of the core MBA curriculum or approval of the Director of MBA Programs.

FIN 710 **3 credits**
Investment Management
Theoretical and practical analyses of investment environment and process. Focuses on characteristics, valuation, and management of various financial instruments, such as common stock, corporate bonds, options, and futures. Students learn how to establish appropriate investment objectives, develop optimal portfolio strategies, estimate risk-return trade-offs, and evaluate investment performance. Prerequisites: Completion of the core MBA curriculum or approval of the Director of MBA Programs.

FIN 712 **3 credits**
Financial Markets and Institutions
Comparative study of the diverse financial instruments and intermediaries existing in today's financial sector. Topics include: the structure of interest rates, relative costs and benefits of each instrument, financial innovation and financial "engineering," the role of banks, thrifts and other intermediaries, and current and future trends in the financial sector. Prerequisites: Completion of the core MBA curriculum or approval of the Director of MBA Programs.

FIN 715 **Portfolio Management** **3 credits**
Strategies investors employ to meet alternative investment objectives. Asset allocation decisions and the management of risk and return emphasized using various quantitative approaches to determine portfolio optimization and asset market equilibrium. Full spectrum of portfolio management issues considered across all classes securities, including equity, fixed-income, and derivative securities. Prerequisites: Completion of the core MBA curriculum and FIN 710 or approval of the Director of MBA Programs.

FIN 740 **Risk Management** **3 credits**
Applies risk management process as an integrated approach to financial, credit and insurable risks. Financial perspective on the corporate risk management function emphasized, using the financial tools of risk.

MGT 710 **Managing Entrepreneurial Organizations** **3 credits**
Developing and managing entrepreneurial organizations. Examines why firms succeed or fail; growth and organizational effectiveness; management systems; and entrepreneur transition. Prerequisites: Completion of the MBA core curriculum or approval of the Director of MBA Programs.

MGT 711 **Seminar in Negotiation** **3 credits**
Enhances students' abilities to use negotiation as a tool for managing conflict, making deals, and making team decision. Examines important aspects of the negotiation process, including preparations, strategies and tactics, international issues, the role of third parties, and ethical issues. Prerequisites: Completion of MBA core curriculum or approval of the Director of MBA Programs.

MGT 712 **Change Management** **3 credits**
Change management is the process of transforming an organization's operations to enhance individual and organizational effectiveness. Both the rate of change and its importance to senior management seem to be accelerating. Examines competing models of change, considers various change methodologies, and explores examples of best practice. Prerequisites: Completion of MBA core curriculum or approval of the Director of MBA Programs.

MIS 740 **Software Concepts** **3 credits**
First course in programming for non-programmers aimed at developing a proficiency in designing and writing programs using a high-level programming language. Topics include standard programming constructs (conditionals, loops, etc.), concept of an algorithm, and fundamental data types (numbers, strings, arrays, etc.). Prerequisite: MBA 730 or admission to the MSIS program.

MIS 742 **Systems Design and Development** **3 credits**
Covers both systems analysis and design and modern database concepts. Introduces basic systems analysis and design tools and techniques used to analyze business processes and data flows. Also focuses on the relational database model and principles of good database design. Prerequisites: Completion of the core MBA curriculum or approval of the Associate Dean.

MIS 744 **Information Systems Planning & Strategy** **3 credits**
Familiarizes students with aspects of developing, implementing and evaluating strategic plans for corporate information systems as a competitive tool; using methods and frameworks for strategic analysis; assisting in establishing an information systems strategy; developing an understanding of change management issues in IS planning for organizations. Prerequisites: Completion of the core MBA curriculum or approval of the Associate Dean.

MIS 746 **Information Systems Project Management** **3 credits**
Conceptual material on project management techniques. Planning, organizing and controlling of projects in manufacturing and service organizations. Includes project management process, project scheduling, project resource management, schedule duration risk analysis and management of project. Prerequisites: MBA 730.

MIS 752 **Advanced Topics in MIS** **3 credits**
Advanced or specialized study in a special topic or subject area in information systems. May be repeated with different subject matter. Prerequisite: MBA 730.

MKT 711 **Strategic Marketing Management** **3 credits**
Development of effective strategic marketing analysis, planning, implementation, and control skills. Emphasis on market appraisal, industry structure, competitive advantage, product management, distribution strategy, promotion management, market segmentation, positioning strategies, and strategic marketing program decision making. Stresses case analysis and the solution of strategic marketing problems. Prerequisite: Completion of the MBA core or approval of the Director of MBA Programs.

MKT 720 **Customer Satisfaction and Service Quality Measurement** **3 credits**
Design, analysis, interpretation, and communication of measurement and multivariate techniques to assess customer satisfaction, service quality and related marketing issues. Includes scaling, sampling, data collection, reliability, and validity. Prerequisite: Completion of the MBA core or approval of the Director of MBA Programs.

MKT 737 **3 credits**

New Service and Product Development

New service and product development process. Evaluation of potential markets. Identification design, and development of new services and products consistent with customer needs. Idea generation, concept testing, test marketing and commercialization discussed. Prerequisites: Completion of the MBA core or approval of the Director of MBA Programs.

MKT 757 **3 credits**

Strategic Database Marketing

Theory and practice of use of databases to enhance marketing programs and build customer relationships. Topics include: one on one marketing, relationship building strategies, customer cloning, RFM, calculating lifetime value of customers, modeling tools and processes, customization of offers and retention strategies. Prerequisites: Completion of the MBA core or consent of the Director of MBA Programs.

MKT 777 **3 credits**

Services Marketing

Marketing problems and strategies specific to service industries. Differences in the marketing of intangibles and services. Emphasis on services in general, rather than any particular industry. Concepts applied to such service of the art information for marketing in today’s changing environment. Key topics include: competitive advantage, segmentation, relationship development, and competitive positioning. Prerequisites: Completion of the MBA core curriculum or consent of the Director of MBA Programs.

Dual MBA and M.S. in Hotel Administration

The dual MBA and M.S. in Hotel Administration program of study is designed for those who seek career and business leadership opportunities in hotel administration. The program will provide students with the needed skills, knowledge, and tools to become visionary and creative business leaders in hotel administration. The core MBA program is designed to advance the knowledge and practice of business and administration. The M.S. in Hotel Administration portion of the dual degree is designed to provide the industry-specific teaching and learning program. The program takes advantage of the natural learning environment that is created by the Las Vegas economy, the entertainment capital of the world. Students will receive a dual degree, an MBA and a M.S. in Hotel Administration.

Admission:

The admission requirements for the dual degree program are the same as those stated under the regular MBA and M.S. in Hotel Administration programs. In addition, The College of Hotel Administration requires that applicants submit evidence of one year of full-time experience in a management or administrative capacity in the hospitality industry. Applicants must be admitted to both the MBA and Master of Science in Hotel Administration programs.

Application Process:

See the Application Process Section under the regular MBA and M.S. in Hotel Administration programs. After consideration by the MBA program, the applicant’s file will be forwarded to the College of Hotel Administration for consideration.

Degrees Requirements:

Students must be admitted to both the MBA and M.S. in Hotel Administration programs with graduate standing. The candidates must successfully complete the 33-credit hours of the MBA required core courses and the 21-credits hours of required Hotel Administration courses. Students must complete the MBA Core before enrolling in Hotel Administration courses. Required courses are:

A. MBA Core Courses:

MBA 702	Statistical Analysis	3
MBA 706	Law, Regulations, and Ethical Issues	3
MBA 707	Organizational Behavior	3
MBA 709	Accounting for Managers	3
MBA 710	Applied Economic Analysis	3
MBA 711	Managerial Finance	3
MBA 715	Market Opportunity Analysis	3
MBA 720	Supply Chain Management	3
MBA 730	Information Systems Management	3
MBA 735	International Business and Cross-cultural Perspectives	3
MBA 795	Strategy Formulation Processes	3
Total MBA Core		33

B. M.S. In Hotel Administration Courses:

HOA 703	Human Resources and Behavior in the Hospitality Industry	3
HOA 705	Financial Analysis for the Service Industries	3
HOA 716	Principles and Practices in Hotel Management, or	
HOA 718	Principles of Casino and Gaming Management, or	
HOA 720	Principles and Practices of Food Service Management	3
HOA 735	Research Methodology	3
HOA 760	Research Seminar in Hotel Administration, or	
HOA 761	Research Seminar in Food Service Administration, or	
HOA 763	Research Seminar in Casino and Gaming Management	3
HOA 751	Hospitality Service Management	3
HOA 791	Professional Paper	3
Total M.S. in Hotel Administration		21

For a detailed description of the courses see MBA and M.S. in Hotel Administration.

Dual degree in Dental Medicine and Master of Business Administration (DMD/MBA)

The University of Nevada, Las Vegas School of Dental Medicine and the College of Business offer a dual Doctorate of Dental Medicine (DMD) and Master of Business Administration (MBA) degree program that allows students to be admitted in both programs and achieve the DMD and MBA degrees. As a concurrent program, the dual degree requires that students satisfy the degree requirements of both programs.

The traditional MBA degree at UNLV requires 48 credit hours. The Dental degree requires 195 credit hours. Under the dual degree program fifteen credit hours of dental courses are accepted towards the MBA degree and nine hours of MBA courses are accepted towards the DMD program.

Admission

Applicants to the DMD/MBA program must submit formal applications for admission to both the School of Dental Medicine and to the College of Business. Students must meet the requirements for admission to both programs. Admissions requirements are the same as those stated under the regular DMD and MBA programs. Contact the UNLV School of Dental Medicine and the College of Business MBA programs for further information on admissions requirements. Applications from current students in either program will be considered. Entry into the MBA program for students from School of Dental Medicine will be no earlier than the Fall semester of year two of the dental curriculum. However, petitions requesting admission to the dual DMD/MBA program from students at more advanced stages will be considered.

Application Process

See application process under the regular MBA and School of Dental Medicine. In addition, include a letter of intent indicating you are applying for the dual DMD/MBA degree.

Degree Requirements

Students must be admitted to both the DMD and MBA programs with graduate standing. The candidates must successfully complete the 186 credit hours of Dentistry and the 33 credit hours of the MBA required course work. Furthermore:

1. UNLV School of Dental Medicine cannot award credit for any class taken before matriculation.
2. A maximum of six credit hours of courses taken prior to admission to the DMD/MBA program may be applied towards the MBA degree requirement. This includes all courses taken as a fully admitted graduate MBA student at an AACSB accredited business school, as an admitted dental student at UNLV, or as a non-admitted student at UNLV before admission to the MBA program.
3. DMD/MBA candidates who subsequently decide to pursue only the DMD or only the MBA must complete

the degree program in its entirety and are subject to the same rules and requirements as students not pursuing the DMD/MBA program.

4. DMD/MBA may not receive credit for taking courses outside their degree program except as set forth in this document and with prior approval.
5. Student honors and class ranks at the School of Dental Medicine will be computed based solely on dental classes. Student honors and class ranks at the College of Business will be computed based solely on business classes.
6. Students in the DMD/MBA program must remain in good standing at both DMD and MBA programs.
7. Students in the DMD/MBA program are subject to the same rules and regulations that apply to all students at the School of Dental Medicine and the College of Business.
8. The College of Business and the School of Dental Medicine reserve the right to limit participation in the program, including dismissal. Those interested are encouraged to submit a request for permission to participate in the program, along with applications for admission, at the earliest possible time.
9. The listing of courses does not constitute a binding commitment that the courses will be offered during the student's course of study or that the graduation requirements will remain unchanged.

MBA Core Required Courses:	33 credits¹
MBA 702 Statistical Analysis	3
MBA 706 Law, Regulations, and Ethical Issues	3
MBA 707 Organizational Behavior	3
MBA 709 Accounting Management	3
MBA 710 Applied Economic Analysis	3
MBA 711 Financial Management	3
MBA 715 Market Opportunity Analysis	3
MBA 720 Supply Chain Management	3
MBA 730 Information Systems Management	3
MBA 735 International Business and Cross-cultural Perspectives	3
MBA 795 Strategy Formulation Processes (to be completed during student's Final semester.	3

Dental courses accepted towards the MBA degree:	15 credits
DEN 7100 Biostatistics in Oral Health Sciences	1.0
DEN 7105 Epidemiology for Oral Health	1.5
DEN 7152 Patient Communications	1.5
DEN 7154 Practice Management Technology I – Patient Record	1.5
DEN 7155 Healthcare Practice & Its Challenges	2.0
DEN 7158 Health Care Practice: Risk, Consent and Outcomes	1.5
DEN 7159 Practice Management Technology II	1.5
DEN 7254 Health Care Administration I	1.5
DEN 7357 Health Care Administration II	3.0

¹ MBA 702, 709, 710, and 711 are prerequisites for to all other MBA courses.

Dual degree in Jurist Doctorate and Master of Business Administration (JD/MBA)

The William S. Boyd School of Law and the College of Business offer a dual Jurist Doctor (JD) and Master of Business Administration (MBA) degree program that allows students to be admitted in both programs and achieve the JD and MBA degrees simultaneously. As a concurrent program, the dual degree requires that students satisfy the degree requirements of both programs.

The traditional MBA degree at UNLV requires 48 credit hours. The traditional Law degree requires 86 credit hours. The JD/MBA dual degree requires 77 Law credit hours and 33 MBA credit hours. Under the dual degree program 15 credit hours of Law courses are accepted towards the MBA degree and nine credit hours of MBA courses are accepted towards the JD degree.

Admission:

Applicants to the JD/MBA program must submit formal applications for admission to both the William S. Boyd School of Law and to the College of Business. Students must meet the requirements for admission to both programs. Admission requirements are the same as those stated under the regular JD and MBA programs. Contact the William S. Boyd School of Law and the College of Business MBA programs for further information on admissions requirements.

While applications from current students in either program will be considered, students normally should seek and satisfy admission to enter both programs upon entering the university. However, petitions requesting admission to the dual JD/MBA program from students at more advanced stages in either program will be considered.

Application Process:

See the application process under the regular MBA and School of Law. In addition, include a letter of intent indicating you are applying for the dual JD/MBA degree.

Degrees Requirements:

Students must be admitted to both the JD and MBA programs with graduate standing. The candidates must successfully complete the 77 credit hours of the Law and the 33 credit hours of the MBA required course work. Furthermore:

1. William S. Boyd School of Law cannot award credit for any class taken before matriculation. JD/MBA candidates must therefore enroll at the School of Law before taking any MBA courses to be counted toward the JD degree.
2. A maximum of six credit hours of courses taken prior to admission to the JD/MBA program may be applied towards the MBA degree requirement. This includes all courses taken as a fully admitted graduate MBA students at an AACSB accredited business school, as an admitted law student at UNLV, or as a non-admitted student at UNLV before admission to the MBA program.

3. JD/MBA candidates who subsequently decide to pursue only the JD or only the MBA must complete the degree program in its entirety and subject to the same rules and requirements as students not pursuing the JD/MBA program. Because students must finish both programs to receive credit toward the JD/MBA, degrees will not be awarded until both programs are finished.
4. JD/MBA candidates must comply with the requirements for all students regarding the maximum amount of time for completion of a degree program. The maximum period for a full-time, day-division student to complete requirements for a JD degree is five years. The maximum period for a part-time, evening-division student to complete requirements for a JD degree is six years. The Graduate College imposes a six-year time limit for completion of a master's program.
5. JD/MBA may not receive credit for taking courses outside their degree program except as set forth in this document and with prior approval.
6. Student honors and class ranks at the William S. Boyd School of Law will be computed based solely on law classes. Student honors and class ranks at the College of Business will be computed based solely on classes taken as business classes.
7. Students in the JD/MBA program must remain in good standing at both JD and MBA programs.
8. Students in the JD/MBA program are subject to the same rules and regulations that apply to all students at the William S. Boyd School of Law and the College of Business.
9. The College of Business and the William S. Boyd School of Law reserve the right to limit participation in the program, including dismissal. Those interested are encouraged to submit a request for permission to participate in the program, along with applications for admission, at the earliest possible time.
10. The listing of courses does not constitute a binding commitment that the courses will be offered during the student's course of study or that the graduation requirements will remain unchanged.

MBA Core Required Courses:

33 credits¹

MBA 702 Statistical Analysis	3
MBA 706 Law, Regulations, and Ethical Issues	3
MBA 707 Organizational Behavior	3
MBA 709 Accounting Management	3
MBA 710 Applied Economic Analysis	3
MBA 711 Financial Management	3
MBA 715 Market Opportunity Analysis	3
MBA 720 Supply Chain Management	3
MBA 730 Information Systems Management	3
MBA 735 International Business and Cross-cultural Perspectives	3
MBA 795 Strategy Formulation Processes	3
(to be completed during student's Final semester)	3

Required Law Courses: 44 credits²

Law 511	Civil Procedure/Alternative Dispute Resolution I	3
LAW 531	Civil Procedure/Alternative Dispute Resolution II	3
LAW 517	Constitutional Law I	3
LAW 503	Contracts I	3
LAW 519	Contracts II	3
LAW 616	Criminal Law	3
LAW 501	Introduction to Law	1
LAW 513	Lawyering Process I	3
LAW 513	Lawyering Process II	3
LAW 610	Lawyering Process III, Appellate Advocacy	4
LAW 613	Professional Responsibility	3
LAW 521	Property I	3
LAW 525	Property II	3
LAW 523	Torts I	3
LAW 529	Torts II	3

Directed Electives at Law School: 18 credits

Students in the JD/MBA program must successfully complete at least 18 credits from the following list:

LAW 637	Advanced Contracts (Sales and Leasing)	3
LAW 663	Advanced Issues in Tax	3
LAW 657	Antitrust	3
LAW 660	Banking Law	3
LAW 605	Basic Bankruptcy	3
LAW 730	Business Bankruptcy	2-3
LAW 626	Business Organizations I	3
LAW 656	Business Organizations II	3
LAW 646	Cyber Law	3
LAW 723	Economics and the Law	3
LAW 618	Employment Discrimination Law	3
LAW 619	Employment Law	3
LAW 603	Federal Income Tax	3
LAW 661	Federal Taxation	1-5
LAW 665	Health Care Organization and Finance	3
LAW 608	Insurance Law	3
LAW 621	Intellectual Property I	3
LAW 629	Intellectual Property II	3
LAW 640	Labor Law	3
LAW 628	Payment Systems	3
LAW 614	Real Estate Finance	3
LAW 615	Secured Transactions	3
LAW 655	Securitization	3
LAW 649	Taxation of Business Entities	3

Free Electives at Law School 15 credits

Students in the JD/MBA program must complete 15 other credits of “free” electives at the law school. These free electives may come from the list of directed electives or from any other elective offered at the law school.

¹ MBA 702, 709, 710, and 711 are prerequisites for to all other MBA courses.

² Law school first-year required courses (500 level) are prerequisites to all 600- and 700-level courses at the law school.

Master of Business Administration – Executive (EMBA)

The Executive Master’s in Business Administration (EMBA) program of study offers an integrated blend of theory and practice and provides a general management emphasis that fosters the professional growth of mid- and upper-level career executives. It provides opportunities for integrating professional experiences with academic management curriculum.

The program is designed to provide a holistic educational experience. Courses are sequenced to assure continuity in learning. Through a lock-step format and an innovative curriculum, a group of highly motivated students will be placed in a collaborative, proactive, integrative, and team-oriented learning environment.

The students will go through the program as a cohort, with the course scheduling being set at the beginning of the cohort’s program. Students will be able to complete the program in 18 months. Classes will meet on weekends. All students will complete the program as a group. This will provide a unique cohort experience that will enhance teamwork throughout the program.

Admission

The student must satisfy the minimum requirements of the Graduate College and the EMBA program. The candidate must meet the following requirements:

1. Submission of completed application form and the required \$100 nonrefundable application fee.
2. Submission of official transcripts of all college-level course work previously taken and evidence of having been awarded the equivalent of a U.S. bachelor’s degree from an accredited college or university with an overall undergraduate grade point average of at least 3.00 on the four-point scale.
3. Submission of GMAT score, taken within the last five years. Applicants with a grade point average below 3.00 must have extensive meaningful work experience and an acceptable score on the GMAT for acceptance to the program, as determined by the Director of MBA Programs.
4. In addition, international applicants must submit a satisfactory TOEFL score (minimum 550) and financial certification.

The above documents are to be mailed to:

Director of MBA Programs
College of Business
University of Nevada, Las Vegas
4505 Maryland Parkway • Box 456001
Las Vegas, NV 89154-6001

5. Evidence of at least seven years of full-time work experience, of which at least the last three years must have been in a key decision-making role.
6. Three letters of recommendation, at least one from the applicant’s current or previous employer and one from someone who can evaluate the applicant’s potential for success in a graduate degree program.

7. Resume.
8. Self-evaluation. The two-page, double-spaced self-evaluation should include a description of significant contributions you have made to your organization and a well-articulated career plan.
9. A personal interview.

All entering students are required to have competency in two areas. First, the applicant must be skilled in the use of word processing and spreadsheet programs. Second, the applicant must possess strong mathematical skills through college algebra. It is the applicant's responsibility to provide satisfactory evidence of these skills.

The cost of the program for admission in the academic year 2005-06 is \$39,000. This includes a \$1,000 nonrefundable deposit, due upon acceptance to the EMBA program, a first installment of \$12,000 and two additional installments of \$13,000. Each installment will be due two weeks prior to the first class meeting of each term. Request for withdrawal from the EMBA program must be made one week prior to the start of each term and the refund amount will only reflect the forthcoming term for which the request was made. No refund for withdrawal will be made thereafter. The \$39,000 fee will cover all tuition and fees, textbooks and other course material, software needs, travel for international trip, parking, all meals and refreshments during class meetings, and other activities associated with the program.

Degree Requirements

Students must be admitted to the EMBA program with graduate standing. The candidates must successfully complete the 43 credit hours of required EMBA courses. The academic performance of students is reviewed on a regular basis. If it is determined that a student is not making satisfactory progress toward meeting degree requirements or if the student's overall GPA falls below 3.00, the student will be placed on probation. Conditions and deadlines for the removal of probation will be specified. Failure to meet the conditions will result in separation from the EMBA program. Graduation requires a minimum overall GPA of 3.00.

Withdrawing from a class is considered as being unsuccessful in that course and in the program and will result in dismissal from the program. A student who, due to extraordinary circumstances, is forced to withdraw from a course and is subsequently dismissed from the program may appeal to the Director of MBA Programs.

Students who do not successfully complete a course in their EMBA program may replace the course with a similar course taken from the regular MBA program at UNLV or with another EMBA cohort at UNLV. The substitution requires the approval of the Director of MBA Programs in the College of Business and is discouraged. Substitution will be possible only under the most unusual circumstances. In no case may more than two courses be substituted.

The content of the courses is customized to meet the need of executives. Classes will generally meet on Friday and Saturday every other weekend. Classes will be from 8:30 a.m. to 12:30 p.m. and 1:30 p.m. to 5:30 p.m. each day.

Students must be able to make a commitment to attend all classes.

The 43 credit hour curriculum is as follows:

EMBA 701	Teamwork & Management Effectiveness	2
EMBA 702	Laws, Regulations & Ethics	2
EMBA 703	Microeconomic Analysis for Business Decision-Making	2
EMBA 704	Information Systems Theory and Practice	2
EMBA 705	Applied Statistics	2
EMBA 706	Organizational Theory: Strategy Implementation Processes	2
EMBA 707	Financial Accounting for Managers	2
EMBA 708	Global and Macroeconomic Environment for Business	2
EMBA 709	Organizational Behavior	2
EMBA 710	Business Finance	2
EMBA 711	Managerial Accounting	2
EMBA 712	Seminar in Financial Management	2
EMBA 713	Strategic Marketing Management	3
EMBA 714	Management of Entrepreneurial Organizations	3
EMBA 715	Strategic Management: Business Strategy and Corporate Strategy	3
EMBA 716	International Business	3
EMBA 717	Negotiations & Conflict Resolution	2
EMBA 718	Executive Decision-Making: Strategy Formation Processes	2
EMBA 719	Executive Assessment & Development	1
EMBA 720	International Seminar	2
Total Program Credit Hours		43

Each cohort will take an international trip. The "International Seminar" will be tied to the international trip and will require students to learn about the culture and business practices of the countries to be visited.

Executive Master's Business Administration

EMBA 701 **2 credits**

Teamwork and Management Effectiveness

Examines why organizations increasingly adopting team-based work processes and circumstances where they are likely to be appropriate and effective. Mechanics of effective teamwork and team management. Includes effective team members and team leadership, organizational support for high performance teams, stages of team development and strategies for managing them, and issues pertaining to international teams. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 702 **2 credits**

Laws, Regulations and Ethics

Explores legal, regulatory and ethical issues which affect managers in their practice of business. Legal systems, philosophical approaches and practical applications. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 703 **2 credits**
Microeconomic Analysis for Business Decision Making
Uses economic analysis to understand crucial topics in business decision making, including: consumer behavior; supply and demand; choosing to input to minimize cost; product differentiation; firm behavior under different types of competition; pricing and advertising strategies; risk, uncertainty, and imperfect information; government regulation; labor issues; and mergers. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 704 **2 credits**
Information Systems Theory and Practice
Introduces concepts of management information systems and decision support systems. Information technology applications for decision making and problem solving at the operational and corporate levels. Prerequisites: Admission to Executive MBA Program and approval of the Dean's Office.

EMBA 705 **2 credits**
Applied Statistics
Effective business research and decision making with the aid of statistical analysis. Hands-on experience with computer spreadsheet software. Covers how to find, manage, analyze, interpret, and effectively present actual business and economic data. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 706 **2 credits**
Organizational Theory: Strategy Implementation Processes
Effective implementation of organizational decisions and strategies. Draws on scholarly research in sociology, psychology, anthropology, and a wide variety of related social sciences. Executive-level overview of organization theory. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 707 **2 credits**
Financial Accounting for Managers
Examines process which determines economic impact of organization activities. Performance measurement, recording, and reporting. Focuses on methods and procedures that lend to the preparation of financial statements and reports to external audiences. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 708 **2 credits**
Global and Macroeconomic Environment for Business
Provides an understanding of macroeconomic conditions that impact firms operating in the global economy. Topics include aggregate demand and national income; business cycles; inflation; unemployment; interest rates; exchange rates; international trade in goods and capital; and fiscal and monetary government policies. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 709 **2 credits**
Organization Behavior
Important concepts and applications in management including motivation, leadership, group dynamics, organization design, decision making, strategic planning and organizational change. Special emphasis on analyzing leadership skills of others and improving leadership potential of participants. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 710 **2 credits**
Business Finance
Examines the role of financial management in creating firm value. Covers fundamental business finance topics and the application of basic finance concepts for decision making in a business environment. Taught from the perspective of a senior-level manager. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 711 **2 credits**
Managerial Accounting
Focus on the use and potential misuse of accounting data by managers. Provides a foundation for identifying and analyzing decision alternatives and evaluating success in accomplishing organizational goals. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 712 **2 credits**
Seminar in Financial Management
Covers major financial management issues pertaining to a firm's operations. Taught primarily through case discussions and use of spreadsheets in financial analysis. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 713 **3 credits**
Strategic Marketing Management
Exposes executives to current marketing concepts. Examines how marketing relates to other functions of the firm and to its external environment. Applies marketing concepts in an effort to analyze, initiate and change marketing actions. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 714 **3 credits**
Management of Entrepreneurial Organizations
Examines issues involved in developing and managing entrepreneurial organizations. Topics include: why some firms fail while others succeed; stages of growth and organization effectiveness; and management systems in an entrepreneurial context, such as strategic planning, organizational development, and leadership. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 715 **3 credits**
Strategic Management: Business Strategy and Corporate Strategy

Explores business strategies (cost leadership, differentiation, tacit collusion, and strategic alliances) and corporate strategies (vertical integration, diversification, merger and acquisition, and globalization strategies.) Economic theories of competition and cooperation. Includes case studies of firms which have successfully or unsuccessfully employed a variety of strategies. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 716 **3 credits**
International Business

Problems and opportunities of business in a global context. Examines international economic, institutional, cultural and legal differences and analyzes their impact on business decisions including: product design, production and marketing, human resources strategy; investment analysis; financial strategy and risk management. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 717 **2 credits**
Negotiations and Conflict Resolution

Examines the nature of conflict and the negotiation process as a tool for managing conflict. Includes preparing negotiations, negotiating strategies and tactics, organizing negotiating teams, coalition bargaining, the importance of individual difference variables, international issues, the role of third parties, and ethical issues. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 718 **2 credits**
Executive Decision Making: Strategy Formation Processes

Explores classic cases and texts on organizational decision-making processes in order to improve participants' capacities to contribute to the effective manufacturing of organizational decisions. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 719 **1 credit**
Executive Assessment and Development

Helps participants to be more capable of understanding and leading change. Includes framework of leadership competency grounded in paradoxical thinking. Leadership concepts presented. Leadership assessment completed for each participant. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

EMBA 720 **2 credits**
International Seminar

Includes problems and environment of international business, which require integrative analysis of these problems. Under faculty supervision, students visit selected international enterprises operating outside the United States and produce a written analysis including specific recommendations. Prerequisites: Admission to the Executive MBA Program and approval of the Dean's Office.

Economics

Chair

Miller, Stephen M. (2001), Professor, B.S., Purdue University; M.A., Ph.D., SUNY at Buffalo.

Graduate Coordinator

Wimmer, Bradley (1998), Associate Professor; B.A., Coe College; Ph.D., University of Kentucky.

Graduate Faculty

Assane, Djeto (1991), Associate Professor; Economics: B.A. University of Abidjan; Ph.D. University of New Mexico.

Carroll, Thomas (1986), Professor; A.B., Miami University; M.A., Ph.D., Syracuse University.

Chen, Lein Lein (1993), Associate Professor; B.S., M.S., Florida International University; Ph.D., University of Miami.

Cronovich, Ronald (1994), Associate Professor; B.A., American University; M.S., Ph.D., University of Michigan.

Daneshvary, Nasser (1990), Professor; B.S., Ghazvin College of Economics and Social Science; M.A., Western Illinois University; Ph.D., University of Tennessee.

Hoppe, Hans-Herman (1986), Professor; M.A., Ph.D., Goethe-University, Frankfurt, West Germany.

Karstenson, Lewis (1979), Associate Professor; B.A., Humboldt State College; M.A., Ph.D., Ohio University.

Malamud, Bernard (1968), Professor; B.S.E.E., Polytechnic Institute of Brooklyn; M.S.I.A., Carnegie-Mellon University; Ph.D., New School for Social Research.

Riddel, Mary (1999), Associate Professor; B.A., University of Colorado, Boulder; M.S., Ph.D., Colorado State University, Ft. Collins.

Robinson, William J. (1980), Associate Professor; B.A., University of Northern Colorado; M.A., Ph.D., University of Colorado, Boulder.

Schlottmann, Alan (2000), Professor; B.A., M.A., Ph.D., Washington University.

Schwer, R. Keith (1986), Professor and Director, Center for Business & Economics Research; Professor; B.B.A, M.A., University of Oklahoma; Ph.D., University of Maryland.

Waddoups, C. Jeffrey (1989), Associate Professor; B.A., Ph.D., University of Utah.

Yamashita, Takashi (2000), Assistant Professor; B.A., International Christian University; M.A., Columbia University; Ph.D., University of California, San Diego.

Professors Emeriti

Hardbeck, George W. (1971-1990), Emeritus Dean of the College of Business and Professor; B.S., M.S., Ph.D., University of Illinois.

Ray, Clarence G. (1971-2000), Emeritus Professor; B.S., College of Charleston; M.A., Ph.D., University of South Carolina.

Simmons, Andrew (1960-1994), Emeritus Professor; B.S., University of London; M.A., Michigan State University; Ph.D., University of London.

White, William T. (1967-1986), Emeritus Professor; B.S., University of Arizona; M.S., Columbia University; Ph.D., Georgetown University.

The Master of Arts degree in Economics provides students with advanced training in applied economics. The program trains students for careers in business and government, and prepares students who desire to continue their studies in economics or finance at the doctoral level. Students in the MA program will obtain a solid foundation in microeconomic and macroeconomic theory, receive training in advanced econometric techniques, and develop their communication skills through writing and presentation. The program also allows students the possibility of pursuing interdisciplinary studies by taking courses in related disciplines such as finance or marketing. An internship program provides opportunities for students to obtain valuable work experience. MA graduates in economics possess the skills that prove attractive for different employers — government agencies, marketing research firms, corporate research and financial departments, and consulting firms. The department welcomes both full and part-time students. Ambitious students can complete the program in one year. Please see our web site for more information <www.unlv.edu/programs/econma>.

Formal preparation for most applicants seeking the Master of Arts degree requires intermediate microeconomic theory and macroeconomic theory. In addition, some form of quantitative preparation, such as calculus and intermediate statistics, is required. As noted below, students must meet general requirements for admission to the Graduate College of the University of Nevada, Las Vegas.

The Department of Economics offers graduate courses during evening hours convenient for both working and full-time students.

Admission Requirements

The first step in the application process requires the submission of relevant application forms, fees, letters of recommendation, official transcripts, test results, and assistantship applications to the Graduate College as outlined in this catalog. International students should check with the Graduate College for current deadlines. The Graduate College requires international students to complete the TOEFL with a minimum score of 550 (written) or 213 (computerized) or show comparable evidence of competence in English.

Students may begin course work in economics in the following classifications: graduate standing or graduate provisional. Admission to graduate standing requires that students must:

1. Meet the general requirements for admission to graduate instruction at the University of Nevada, Las Vegas.
2. Complete the prerequisite preparation in microeconomic theory, macroeconomic theory, and quantitative economics. The theory preparation may be satisfied by successfully completing ECO 301 and ECO 302. Completing ECO 262 may satisfy the quantitative preparation. These courses, however, do not apply toward the 30 hours of graduate course work required for the Master of Arts degree. In addition, students seeking to meet prerequisite requirements with undergraduate courses may need to take a placement exam to demonstrate competence.

3. Achieve score of 2100 or higher on the formula: 200 times grade point average (computed on a 4.00 scale) plus the product of 1.5 and the combined scores on the quantitative and verbal portions of the Graduate Record Exam. Students may substitute the GMAT score for the GRE, in which case the GMAT score will be multiplied by the admission formula.

Students falling short of the requirements for admission with graduate standing may be admitted as graduate provisional students. Students admitted with graduate provisional status must successfully complete three courses designated by the graduate coordinator, with an average of 3.33 or better within the first year of enrollment to qualify for admission with graduate standing.

Degree Requirements

Degree requirements may exceed (at the option of the student's advisor), but must not be less than the minimum outlined below. The advisor and/or the coordinator of graduate studies recommend specific course requirements for this degree.

Thirty semester credit hours must be completed, of which, at least 24 credits are taken in 700-level courses.

Eighteen hours of required courses in economics include:

- Mathematical Economics (ECO 640)
- Macroeconomic Theory (ECO 701)
- Microeconomic Theory (ECO 702)
- Statistical Modeling (ECO 770)
- Econometrics (ECO 772)
- Seminar in Economic Research (ECO 793)
- Internship (ECO 784)

Elective course work to complete the thirty-hour requirement must include two additional courses in economics and may include up to two courses in a related discipline, subject to the approval of the graduate coordinator. The internship requirement may be waived by the department upon evidence of appropriate experience. As previously noted, all noneconomic electives must come from the same department and the student must meet the prerequisites for these courses.

Students not making satisfactory progress toward the degree are subject to dismissal. A student who earns two grades of C, D, or F in the first four graduate courses, or who receives the third grade of C, D, or F in a graduate course will be dropped from the M.A. program. A minimum 3.00 average is required to earn the Master of Arts degree.

To qualify for graduation, each student must present an empirical research paper or a thesis. The research paper will be presented to students and faculty at the department research seminar. The source of this paper is a project in the professional paper course (ECO 794). In the case of a thesis, the student will register for six hours of thesis credit in lieu of course work outside of economics and Professional Paper (ECO 794). (See Academic Policy section for detailed requirements concerning presentation of the thesis.)

It should be noted that a student taking four courses a semester could finish in one year by adding an elective course in the fall and in the spring semesters and completing the research paper with an independent study or internship project in the summer.

Economics

ECO 701 3 credits Macroeconomic Theory

Investigates the behavior of the main economic aggregates: output, employment, consumption, savings, investment, interest rates, and price level. Explores and assesses the major theories of the determinants and interrelations among these variables. Also analyzes the impact of various policies on the macroeconomy. Prerequisites: ECO 740.

ECO 702 3 credits Microeconomic Theory

Uses quantitative and graphic techniques to analyze household and firm decisions as a basis for market interactions. Topics include the determinants of demand and supply, price and output determination under perfect and imperfect competition, economic efficiency, income distribution, general equilibrium, and economic welfare. Co-requisite: ECO 740. Prerequisites: Graduate standing.

ECO 707 3 credits Environmental and Natural Resource Economics

Relationship between environmental quality and natural resources, using economic analysis. Identifies solutions to economic problems arising from resource scarcity and use. Economic growth, externalities. Prerequisites: Graduate standing.

ECO 709 3 credits Regional Economic Analysis

Theoretical and empirical analysis of the regional component of economic activity. Examination of location factors, regional and urban development theory, and regional/urban structure and growth theory. Explores regional analysis and forecasting. Prerequisites: Graduate standing.

ECO 720 3 credits Health Economics and Policy

Analysis of the U.S. health care markets. Examination of physician, hospital, and insurance markets. Exploration of the role of regulation and technology. Includes international comparisons. Prerequisites: Graduate standing.

ECO 732 3 credits Political Economy and Economic Policy

Role of markets, organizations, and governments in economic policy, including topics such as collective decision making, efficient and equitable social choice, regulation, and behavior of bureaucracies. Prerequisites: Graduate standing in the MPA or Economics program and consent of instructor.

ECO 733 3 credits Economic History of Europe

Economic and social background of European national and international development with emphasis upon the period 1500 to present.

ECO 734 **3 credits**
Economic History of the United States
Economic and social background of the American economy from the colonial period to the present. Prerequisite: ECO 301 and 302 or equivalent.

ECO 742 **3 credits**
History of Economic Thought
Criticism and evaluation of economic thought from ancient to modern times; main emphasis devoted to the development of economic thought since Adam Smith. Prerequisite: Graduate standing.

ECO 743 **3 credits**
Economic Fluctuations
Analysis of economic fluctuations from classical times to the present. Intensive study of factors which contribute to cyclical waves. Evaluation of selected economic indicators, business forecasting, and stabilization techniques. Prerequisites: Graduate standing.

ECO 750 **3 credits**
International Monetary Economics
Theories, institutions, and policies of international monetary economics and their impact on macroeconomic performance. Topics include international money markets, monetary and exchange rate policies, policy effectiveness under different regimes, the role of expectations, and the effect of capital mobility. Prerequisites: Graduate standing.

ECO 760 **3 credits**
International Trade
Study of international trade and international commercial policies. Topics include theories and policies related to international movement of goods, services, and factors of production. Prerequisites: Graduate standing.

ECO 763 **3 credits**
Economics and the Law
(Formerly ECO 780.) Application of economic analysis to the topics confronted in litigation. Topics include: microeconomic theory, property rights, contracts, torts, discrimination, eminent domain, copyrights, patents, antitrust, and criminal law. Prerequisites: Graduate standing.

ECO 765 **3 credits**
Labor Economics
Examination of competing theories of labor market behavior. Topics include theories of labor supply, labor demand, wage determination, unemployment, discrimination and the impact of unions and government institutions on labor market outcomes. Prerequisites: Graduate standing.

ECO 770 **3 credits**
Statistical Modeling
Advanced statistical techniques with applications pertinent to business. Topics include hypothesis testing, multiple regression analysis, analysis of variance, and nonparametric statistics. Extensive use of computer software packages. Prerequisites: Graduate standing.

ECO 772 **3 credits**
Econometrics
Integration of mathematical models and statistical techniques in the estimation and testing of economic theory. Topics include the nature of economic models, simple and multiple regression, problems of economic time series, and the estimation of simultaneous equations systems. Prerequisite: Graduate standing, ECO 740, and ECO 770.

ECO 773 **3 credits**
Business and Economic Forecasting
Evaluation of the uses and misuses of forecasting techniques in economics, business and governmental decision making. Exploration of techniques of data handling including exponential smoothing, seasonal and cyclical adjustments. Use of simple and multiple regression models and advanced econometric techniques in forecasting. Nature and estimation of autoregressive moving average (ARIMA) models. Prerequisite: Graduate standing and ECO 770.

ECO 780 **3 credits**
Seminar in Economic Theory and Policy
Designed for the study of some specialized topic in economic theory or policy. Prerequisites: ECO 702, and ECO 770.

ECO 784 **3 credits**
Internship
Internship with business firms, non-profit organizations or government agencies. Project report and internship conference required. Students will receive S/F for final grade. Co-Requisite: ECO 772. Prerequisites: ECO 702, ECO 740, ECO 770, ECO 793.

ECO 788 **1 credit**
Topics in Economics
Topics of interest to managers offered on a rotating basis. Possible topics include environmental economics, health economics, international economics, labor economics, regional economics, the economics of education, the economics of regulation, and economic forecasting. May be repeated to a maximum of three credits. Prerequisites: ECO 301, 302, and 362 or equivalent. May not be taken for credit toward M.A. degree in Economics.

ECO 790 **1-6 credits**
Independent Study
Directed research course under the supervision of a member of the graduate faculty, culminating in a written paper. Prerequisite: Consent of Department Chair or Graduate Coordinator.

**ECO 791
Thesis**

3-6 credits

May be repeated but only six credits will be applied to the student's program. S/F grading only.

ECO 793

1-3 credits

Seminar in Economic Research

Provides students with hands-on training in empirical modeling, promotes critical thinking, teaches use of tool kit of research techniques and reinforces the student's understanding of economic concepts relating to economics research. Prerequisites: Graduate standing in Economics.

ECO 794

3 credits

Professional Paper

Directed research under the supervision of a member of the graduate faculty, culminating in a professional paper that will be presented to the student's professional-paper committee. Students will participate in a weekly seminar, presenting results of their research. S/F course grading only. Prerequisites: ECO 701, ECO 702, ECO 740, ECO 772, ECO 793.

The following undergraduate courses have been approved for use in graduate programs. Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the UNLV Undergraduate Catalog under the corresponding 400 number. Credit at the 600-level normally requires additional work.

ECO 602 Topics in Microeconomics

ECO 655 Economics of Industrial Organization

Management Information Systems

Chair

Reza Torkzadeh (1999), Professor Ph.D., University of Lancaster, UK.

Graduate Faculty

Chang, Jerry (2000), Assistant Professor, B.S., National Taiwan Ocean Univ.; M.S., Central Michigan; MBA, Texas A&M; Ph.D., University of Pittsburgh.

Demirhan, Didem (2002), Assistant Professor, Ph.D., University of Texas at Dallas.

Deng, Honghui (2003), Assistant Professor; B.S., B.S.B.A., Chongqing University; Ph.D. Candidate, University of Texas at Austin.

Han, Taedong (2000), Assistant Professor, B.B.A., Yonsei Univ.; M.A., Univ. of Arizona, Ph.D., Georgia State University.

Hong, Weiyin (2001), Assistant Professor, B.S., Fudan Univ.; Ph.D., Hong Kong University of Sciences.

Moore, Trevor (2000), Assistant Professor, B.A., Sunderland Polytechnic; M.S., Univ. of Essex; Ph.D., Aston University, UK.

Peffer, Ken (2003), Associate Professor; B.A., New College; Ph.D. in MIS, Purdue University.

Rothenberger, Marcus (2004), Associate Professor; B.S., Darmstadt University of Technology, Germany; MBA, Ph.D. Arizona State University.

Smith, Deborah (2001), Assistant Professor, B.A., Univ. of Texas; MBA, Univ. of Texas; Ph.D., Texas A&M University.

Program Description

This program prepares graduates for professional and managerial careers in IT or for doctoral studies leading to research and teaching careers in IS. This objective is achieved through a balanced emphasis on theory and practice. The program prepares graduates with a broad-based knowledge of information systems design, development, implementation, evaluation, and maintenance. The graduates will understand IT's dynamic nature and will be able to use and manage IT for problem solving, decision-making, competitive advantage, and innovation. Courses in the program include projects that allow students to organize team activities, analyze problems and propose solutions, explain project-related decisions, document and communicate progress, collect and analyze data, and present solutions. Students develop written and spoken communication skills. Students in this program write an MS thesis, a substantial original work that contributes to the body of knowledge in IS and business.

Students work closely with research faculty on the thesis with the objective of producing publishable quality research outcomes. The thesis prepares students for professional careers by giving them unique skills or knowledge with professional value. It prepares research oriented students with research skills that will be invaluable in pursuing the Ph.D. Students in the program take pride in using the thesis to learn something truly unique.

This degree program will prepare the graduate with:

- A deep understanding of systems thinking and ways that IT can be used to enhance effectiveness of the individual and organizations.

- The ability to analyze business problems, to develop system solutions, and apply information technology to obtain business solutions.
- A comprehensive understanding of the theoretical basis of management information systems and current research questions.
- The ability to learn on a continuing basis to stay current with rapidly changing technologies.
- The ability to effectively communicate the technology and its application to business executives and users of information systems.
- The knowledge and skills to function as an information technology professional in public or private organization.
- Excellent preparation to enter a doctoral program in MIS.

Program Overview

Each student completes a total of 36 credit hours in MIS courses with a minimum GPA of 3.0 and a master-level thesis. The student's program will be selected in consultation with and approved by the student's advisor and the department chair and may include up to two courses from supporting areas other than MIS, such as accounting, law, computer science, economics, social sciences, and management.

Admission Requirements

- Bachelor of Arts or Bachelor of Science degree
- Application to the Graduate College at UNLV
- Official transcripts of all college-level work
- Two letters of recommendation in sealed envelopes
- Minimum undergraduate GPA of 3.0 on a four-point scale
- Official GMAT or GRE score. A score of 550 or higher is required on the GMAT or a score in the 50th percentile or higher is required on the general aptitude portion of the GRE.

The GMAT test score should be reflective of verbal and quantitative aptitude. GMAT or GRE scores over five years old are not accepted.

Individuals with deficiencies in their undergraduate background may be required to enroll in selected additional undergraduate courses to satisfy the M.S. degree requirements. A maximum of 12 credit hours may be transferred into the program if taken recently from an AACSB accredited school. The department chair and the associate dean must approve any earned credits for transfer.

Individuals with degrees in disciplines other than business are required to take the following MBA core courses: Statistics (MBA 702), Accounting Management (MBA 709), Applied Economic Analysis (MBA 710), Managerial Finance (MBA 711) as prerequisites. MBA 730 is the prerequisite for all courses in this program. The department chair and the associate dean may waive some of these leveling courses for individuals with extensive business and information systems experience.

The application forms, fees, letters of recommendation, official transcripts, test results, and assistantship applications must be submitted to the Graduate College as outlined in this catalog. International students are required by the Graduate College to complete the TOEFL with a minimum score of

550 (written) or 213 (computerized) or show comparable evidence of competence in English. International students should check with the Graduate College for current deadlines.

Degree Requirements

Completion of the degree requirements for the Master of Science in Management Information Systems include:

- Completion of a minimum of 36 credit hours of M.S. in MIS courses.
- Completion and defense of master's thesis.
- A grade point average of at least 3.00 for course work required for the degree.
- No grade lower than C is acceptable.

Each student's program of course work must be selected in consultation with and approved by the student's advisor and the department chair, and may include up to two courses (a total of 6 units) from selected disciplines other than MIS such as cognitive psychology, computer science, accounting, or economics. Students are expected to select a research advisor by the end of their first year, to attend all departmental seminars, and to present a research seminar prior to graduation. Students are also expected to publish at least one research-based paper in a peer-reviewed journal.

Students with unsatisfactory progress toward the degree requirements are subject to dismissal. A student with a grade of C or lower in any of the required courses for the degree will be put on probation for one semester. Conditions and deadlines for the removal of probation will be specified. Failure to meet the condition will result in departure from the program. A student with two grades of C or lower will be dropped from the program. Students are required to register for six hours of thesis. They are advised to split these six hours of thesis and register for three hours each during the last two semesters.

The following MIS courses are listed in the MBA section of this catalog:

MIS 740*	3 credits
Software Concepts	
MIS 742*	3 credits
Systems Design and Development	
MIS 744*	3 credits
Information Systems Planning & Strategy	
MIS 746*	3 credits
Information Systems Project Management	
MIS 752*	3 credits
Advanced Topics in MIS	

Management Information Systems

MIS 753 **3-6 credits**

Independent Study

Independent study under the direction of a faculty advisor of a topic in information systems. May be repeated for credit. Prerequisite: MBA 730.

MIS 760 **3 credits**

Data Communications and Systems

Concepts, models, architectures, protocols, standards, and security for the design, implementation, and management of digital networks. Essentials of local area networks (LAN), metropolitan area networks (MAN), and wide area networks (WAN). Transmission and switching efficiency, and regulatory and technical environments. Topics include: security and authentication, operating systems, e-commerce etc. Prerequisite: MBA 730 or admission to the MSIS program.

MIS 762 **3 credits**

Systems Analysis, Modeling and Design

Systems development life cycle, analysis and design techniques. Information systems planning, project identification and selection, requirements collection and structuring, process modeling, data modeling. Design of interface and data management, system implementation and operation, system maintenance, and change management. Rapid application development and prototyping. Prerequisite: MBA 730.

MIS 764 **3 credits**

Advanced Web Development and Electronic Commerce

Integration of technology and commercial practices for doing business on the Internet. Business and social implications of emergence of electronic commerce in cyberspace. Technological and organizational issues. Introduction to and application of advanced tools and techniques in the development of commercial-quality web sites. Prerequisite: MBA 730.

MIS 766 **3 credits**

Data Management

Concepts, principles, issues and techniques for managing corporate data resources. Techniques for managing design and development of large database systems including logical

data models, concurrent processing, data distribution, database administration, data warehousing, data cleansing, and data mining. Prerequisite: MBA 730.

MIS 768 **3 credits**

Java Programming

Java programming language, platform, software delivery environment, internet commerce environment, applications vs. applets/services, Java APIs and extensions, paradigms in information systems, network computers, security and future directions. Prerequisite: MIS 740.

MIS 770 **3 credits**

IS Security, Audit and Control

Investigates broad selection of contemporary issues in computer security, including an assessment of state-of-the-art approaches used to address security problems. Integration with organizational/informational systems audit, computer information systems, and management practices. Prerequisite: MBA 730.

MIS 772 **3 credits**

Advanced Information Systems

Technical and managerial issues in the effective development and use of decision support systems (DDS) from three distinct approaches: data, intelligence and groups. Extensive hands-on exercises with state-of-the-art software. Exposure to current industry best practices. Prerequisite: MBA 730.

MIS 773 **3 credits**

Research Seminar in Information Systems

Survey a range of historic and current research in IS to understand current problems of interest to IS researchers and methods used to address them. A major deliverable for the course will be a proposal for a thesis research project. Prerequisite: MBA 730.

MIS 780 **3-6 credits**

Thesis

Qualified students working on an individual basis with professors who have agreed to supervise such work. The thesis must be a substantial piece of work demonstrating the use of research methods and presentation of research results. Students are expected to attend research seminars. This course is a six-credit hour thesis and is expected to take two semesters to complete. Prerequisite: MIS 773 with a minimum grade of B.

College of Education

The mission of the College of Education is to prepare professionals for changing educational contexts. Graduate programs in the College of Education provide a variety of opportunities to prepare for continued professional practice, educational leadership, research, and scholarship in a wide arena of educational settings. Graduate programs in the College of Education include master, educational specialist, and doctoral degrees as well as postbaccalaureate programs for initial teacher licensure and additional endorsement to licensure. These programs are available in the departments of Curriculum and Instruction, Educational Leadership, Educational Psychology, Special Education, and Sports Education Leadership. The College of Education has an outstanding graduate faculty who are nationally recognized for their scholarship and leadership in their respective disciplines.

The College of Education provides dynamic graduate programs that engage students in field-based practice and research, offering students an exciting opportunity to study at a nationally recognized university situated within one of the fastest growing cities and school districts in the country.

The College of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE) and the State of Nevada.

Jane McCarthy, Interim Dean

Doctoral Degrees in Education

The College of Education offers the Doctor of Philosophy (Ph.D.) and the Doctor of Education (Ed.D.) degrees. Doctor of Philosophy programs are designed to prepare individuals to become skilled researchers, university faculty, and leaders in school districts and community agencies.

Doctor of Education (Ed.D.) programs are designed to prepare candidates for a lifetime of professional service, effective practice, and the application of inquiry.

The following doctoral degrees are offered:

- Ed.D in Curriculum and Instruction
- Ed.D in Educational Leadership
- Ed.D in Special Education
- Ph.D. in Curriculum and Instruction
- Ph.D. in Educational Leadership
- Ph.D. in Educational Psychology
- Ph.D. in Learning and Technology
- Ph.D. in Special Education
- Ph.D. in Sports Education and Leadership
- Ph.D. in Teacher Education

All general academic regulations of the Graduate College apply to students in doctoral programs except for specific variations identified by department. In addition, individual departments may have supplementary doctoral program requirements and may limit program enrollment. Therefore, students are advised to contact their department of choice for additional information.

Admission Requirements

All general admission requirements of the Graduate College must be satisfied. Responsibility for establishing and applying supplemental admission requirements rests with each department. The Graduate College and the departments screen applications for admission. Upon recommendation of the department, the Graduate College gives the final approval of admission.

Admission to each department program is limited and each department has established a deadline for completed applications. However, any approved courses taken after the application is filed may be used on the program of study if admission is accomplished. Please refer to departmental guidelines regarding this point.

To apply for doctoral program admission, the applicant must:

1. Hold a master's degree from an accredited program in an area of study closely related to the chosen field of specialization;
2. Present evidence of successful professional experience in a field related to the chosen field of specialization; and
3. Meet all additional criteria and provide the necessary evidence of qualifications stipulated by the department in which admission is desired.

Degree Requirements

The Doctor of Philosophy (Ph.D.) and Doctor of Education degrees require a minimum of 60 to 72 semester hours beyond the master's degree. Each department specifies how these semester hours are distributed. Students must maintain continuous enrollment of at least three hours each semester (except summers) throughout the program period.

Residency Requirements for Doctoral Programs

A minimum number of semester hours of credit must be earned at the University of Nevada, Las Vegas campus. Each department has specific requirements for the number of semester hours that constitute the residency requirement.

Course requirements and semester hours taken elsewhere (whether prior to or subsequent to admission) or course requirements taken at the University of Nevada, Las Vegas prior to admission may be utilized in meeting degree requirements at the discretion of each department. Acceptance of courses taken prior to admittance into the doctoral program are subject to the constraints noted in the general academic regulations of the Graduate College and the specific residence requirements of the doctoral program.

The Advisor and the Student's Committee

At the time a student is admitted, the department must designate a temporary program advisor who is a graduate faculty member of the department. The Graduate College must approve the selection of the student's committee when the student has completed a specific number of semester hours determined by the department and committee. The committee guidelines are as follows:

1. The chair and/or co-chairs must be a member(s) of the doctoral faculty designated by the department. It may be the individual(s) who has served as the temporary chair(s).
2. The committee must include at least two members of the doctoral faculty in the student's department.
3. A representative who is a member of the graduate faculty at the University of Nevada, Las Vegas and who is from a department other than the student's must serve on the student's committee. The Dean of the Graduate College appoints this representative when the committee is formed.

The temporary program advisor is responsible for the guidance of the student in course selection and general advisement up to the time of appointment of the student's committee. The chair/co-chairs of the student's committee will have primary responsibility for developing, in consultation with the student, a program of study based on the stated requirements and tailored to meet the student's degree objectives. The committee is responsible for conducting and evaluating the comprehensive and final examination and approving the dissertation topic.

The Program of Studies

When the student has completed the minimum number of semester hours specified by the committee, the program of studies must be filed with the Graduate College. Changes in the approved program require approval by the student, the student's committee, and the Graduate College.

The Doctoral Core Requirement

Each doctoral student will be required to complete a core of studies, which is selected and approved by the student's committee. The content of the core will include but not be limited to the following:

1. Analysis and evaluation of major issues confronting American education that are of significance to all professional educators and/or historical, philosophical, or social foundations of American education.
2. Research concepts and tools that are appropriate to the needs of the student as a consumer of research-based information, as a user of concepts and tools in the dissertation project and as an informed conductor of applied studies. At least six semester course credits are required to be taken by each doctoral student in research methods, interpretation, and/or application. Courses are to be selected by the student's committee from an approved list of courses provided by the department.

The Qualifying Examination

Some departments require a qualifying examination as a part of the screening process for admission or for diagnostic purposes to be given shortly after admission. Students should consult the specific department for more information.

The Comprehensive Examination

A comprehensive examination, both oral and written, must be conducted by the committee during the term in which all work on the program, except the dissertation, will be completed. The examination will be scheduled, announced, and conducted according to the procedures established by each department and the Graduate College. The comprehensive examinations must be completed successfully before the student is advanced to candidacy. Satisfactory performance on the examination requires unanimous approval of the Committee.

Advancement to Candidacy

The student will be advanced to candidacy upon successful completion of all course work and the passing of the comprehensive examination. Students may register for three dissertation credits before they have been formally advanced to candidacy. Advancement to candidacy must be approved unanimously by the committee, and it must be accomplished within four years of the student's matriculation. The degree program must be completed within six years. If these contingencies are not met, the student will be separated from the Graduate College.

Dissertation

The dissertation topic will involve scholarly, practical consideration of some professional problem designed to contribute to the improvement of educational practice or the body of educational theory. The dissertation should be related to the student's individual program of study, and it must be approved by the committee. The student is referred to department and Graduate College regulations governing the preparation and submission of the dissertation for all technical matters such as form, style, and deadlines for filing.

Final Examination

Following completion of the dissertation, an oral defense will be conducted by the committee. It will be scheduled, announced and conducted according to the procedures and deadlines noted by the department and the Graduate College. Satisfactory performance on the examination requires unanimous approval of the committee.

Application for Graduation

Formal application for graduation must be made according to the procedures noted by the Graduate College.

Master's and Educational Specialist Degrees

Each department offers the Master of Education and/or Master of Science degree, and several departments also offer the Educational Specialist degree. Due to the unique nature of these programs, each department provides information specific to these graduate degrees

Licensure Programs

The College of Education provides programs to meet the needs of persons who hold the baccalaureate degree and who wish to be licensed in the State of Nevada. Graduate Licensure Programs are offered for persons who wish to pursue a license and/or a master's degree while obtaining a license in administration or elementary, secondary, special or work force education. Individuals interested in graduate-level licensure possibilities are encouraged to contact the appropriate department.

Curriculum and Instruction

Chair

Levitt, Gregory A. (2001), Professor; B.A., Capitol University; M.A., Ohio State University; Ph.D., Ohio State University.

Graduate Coordinators

Bean, Thomas W. (1995), Professor; B.A., University of Hawaii at Manoa; M.S., Southern Oregon State College; Ph.D., Arizona State University.
Ford, Marilyn Sue (1984), Associate Professor; B.S., Bowling Green State University; M.Ed., University of Nevada, Las Vegas; Ph.D., Arizona State University.
Odell, Sandra (1996), Professor; B.S., M.A., Ph.D., University of New Mexico.

Graduate Faculty

Boone, Randall A. (1991), Professor; B.S., M.S., University of Central Arkansas; Ph.D., University of Oregon.
Crippen, Kent J. (2001), Assistant Professor; B.S., University of Nebraska-Lincoln; M.Ed., University of Nebraska-Lincoln; Ph.D., University of Nebraska-Lincoln.
Giorgis, Cynthia (1995), Associate Professor; B.S., Chadron State College; MLS, Ph.D., University of Arizona.
Grubaugh, Steven J. (1991), Professor; B.A., California State University, Sonoma; M.A., Ed.D., University of Northern Colorado.
Hartley, Kendall (1999), Assistant Professor; B.S., Ph.D., University of Nebraska-Lincoln; M.S., University of Iowa.
Lawrence, C. Edward (1998), Clinical Assistant; B.S., West Virginia State College; M.E., Marquette University; Ph.D., University of Wisconsin-Milwaukee.
Lin, Emily Shu-Ying (2002), Assistant Professor; B.Ed., M.A., University of British Columbia; Ph.D., University of Toronto.
McCafferty, Steven (1995), Associate Professor; B.A., California State University; M.A., University of Hawaii; Ph.D., University of New Mexico.
McCarthy, Jane (1991), Professor; B.A., Douglass College-Rutgers; M.S., Florida State University, Tallahassee; Ed.D., University of Houston.
McKinney, Marilyn M. (1988), Professor; B.A., Mary Washington College; M.S., Ed.D., Northwest Missouri State University; Ph.D., University of Iowa.
Mills, Rebecca (1987), Professor and Vice President for Student Life; B.S.E., M.S.E., University of Central Arkansas; Ed.D., University of Arkansas.
Pollak, Judy (1991), Associate Professor; B.A., Ed.D., East Texas State University, Commerce; M.S., East Texas State University, Texarkana.
Quinn, Linda (1999), Professor and Associate Dean; B.S., Portland State University; Ed.D., University of Houston.
Ramirez, Maria G. (1989), Associate Professor; B.S., M.A., Texas A&I University; Ph.D., University of Kansas.
Schrader, Peter (2003), Assistant Professor; B.S., M.A., Ph.D., University of Connecticut.
Serafini, Frank W., Jr. (2001), Assistant Professor; B.A., Fort Lewis College; M.Ed., Arizona State University; Ph.D., Arizona State University.
Shih, Jeffrey (1999), Assistant Professor; B.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.
Speer, William (1998), Professor; B.S., M.S., Ed.D., Northern Illinois University; Ph.D., Kent State University.
Strudler, Neal (1989), Professor; B.A., State University of New York at Albany; M.A., George Peabody College for Teachers; M.A., Ph.D., University of Oregon.

- Troutman, Porter L. (1971), Professor; B.S., Southern University; M.A., Northern Arizona University; Ed.S., University of Nevada, Las Vegas; Ed.D., Northern Arizona University.
- Usnick, Virginia E. (1990), Associate Professor; B.S., University of Nevada, Reno; M.Ed., University of Nevada, Las Vegas; Ph.D., Arizona State University.
- Wang, Jian (1998), Assistant Professor; B.A., Nanchang Technical and Vocational Teacher's College; M.A., Northeast Normal University; Ph.D., Michigan State University.
- Young, Martha W. (1986), Professor and Associate Dean; B.A., M.A., Ph.D., University of New Mexico; M.A., St. John's College.

Professors Emeriti

- Boord, Robert O. (1963-1994), Emeritus Professor; B.S., M.S., Ed.D., Indiana University.
- Case, James B. (1969-1994), Emeritus Professor; B.A., M.S., Ph.D., University of Toledo.
- Hendrix, Holbert H. (1956-1980), Emeritus Professor; B.S., M.S., Indiana University; Ph.D., State University of Iowa.
- Kirkpatrick, Thomas E. (1978-1993), Emeritus Associate Professor; B.S., Florida State University; M.A.C.T., University of Tennessee; Ph.D., Ohio State University.
- Lockette, Agnes L. (1971-1984), Emeritus Associate Professor; B.S., Albany State College; M.Ed., University of Nevada, Las Vegas; Ed.D., University of Arizona.
- Lyons, Kathleen P. (1971-1987), Emeritus Associate Professor; B.S., Siena Heights College; M.S., University of Detroit; M.A.T., Ed.D., Indiana University.
- Phillips, Leonard W. (1966-1994), Emeritus Associate Professor; B.A., University of California, Berkeley; M.A., Humboldt State College; Ed.D., Michigan State University.
- Trione, Verdun (1966-1987), Emeritus Professor; B.A., Roosevelt University; M.A., DePaul University; Ed.D., University of California, Berkeley.
- Vergiels, John M. (1968-1997), Emeritus Professor; B.S., M.Ed., Ph.D., University of Toledo.
- Warren, John H. (1971-1994), Emeritus Associate Professor; B.S., Illinois State University; M.Ed., University of California, Los Angeles.

The Department of Curriculum and Instruction (C&I) offers graduate degrees in education at the master, specialist, and doctoral levels. All C&I graduate programs are aimed at providing the professional experiences required by teachers, field supervisors, curriculum specialists, adult educators, and future professors of education who are dedicated to school improvement.

Master Degree Programs

The Department of C&I offers the Master of Education (M.Ed.) and the Master of Science (M.S.) degrees. Both degrees require a minimum of 36 semester hours of study. The M.Ed. includes a core of three semester hours in research, three semester hours in foundations, and three semester hours in curriculum and instruction. The M.S. includes a core of six semester hours in research and three semester hours in foundations.

The Department of C&I offers the following areas of emphasis for a M.Ed. or M.S. degree:

Emphases:

- Art Education
- Children's and Young Adult Literature
- Elementary Education
- English Language Arts Education
- Library Science
- Literacy Education
- Mathematics Education
- Multicultural Education
- Postsecondary Teaching English as a Second Language
- Reading Specialist
- Science Education
- Social Studies Education
- Teacher Leadership
- Secondary Education
- Teaching English as a Second Language (TESL)
- Technology Integration
- Technology Leadership

Licensure:

- Elementary Education Endorsement
- Graduate Licensure Program

Graduate courses offered in the Department of C&I are listed under five prefixes: CIE, CIS, CIG, CIL, and CIT. Students are advised to review all department courses and to read the course descriptions carefully. Students should contact their advisors if additional clarification is needed. A Graduate Handbook for master's students, available on-line at <http://ci.unlv.edu>, provides additional information.

Admissions Requirements for M.Ed. and M.S.

In addition to meeting the admission requirements of the Graduate College, as outlined in the front of this catalog, applicants must also meet the requirements established by the Department of C&I. They are:

1. An overall undergraduate grade point average (GPA) of 3.00 is required for full graduate status. Students with a GPA of less than 3.00 but greater or equal to 2.75 may be admitted to the graduate program with provisional status;

2. A minimum of 18 hours of course work in professional education taken at the undergraduate or postbaccalaureate level. Exception to this requirement exists for graduate licensure students or other emphasis areas with department approval;
3. A completed application for admission sent to the Graduate College;
4. A one- to two-page statement of professional goals mailed directly to C&I (Attention: Graduate Coordinator). The names with contact information of two professional references and intended emphasis area of study should be included in the statement;
5. Two sets of official transcripts from all previously attended colleges and universities. One set of transcripts must be sent directly to the Graduate College; the other set must be sent directly to C&I (Attention: Graduate Coordinator).

Applications are processed when all credentials required by both the Graduate College and C&I have been received. Once received, materials are forwarded to the Graduate Coordinator of C&I who evaluates the applicant's credentials and recommends either 1) admission to full or provisional graduate standing, depending on the strength of the applicant's academic credentials, or 2) denial. Those who wish to begin studies but who missed the application deadline may enroll as a non-degree seeking graduate student. However, since there is no guarantee that courses taken as a non-degree student will count toward a degree, and since a maximum of 15 hours taken prior to admission to the program may be used to meet degree requirements, candidates are urged to seek advisement prior to registering for any course(s). Students may call (702) 895-1986 or e-mail (cigrad@unlv.nevada.edu) for assistance.

Advisor Assignment and Program of Studies

The Graduate College will mail official written notification of acceptance. In addition, a letter will be mailed from C&I identifying the advisor. Students are responsible for contacting their advisors.

Degree Requirements for M.Ed. and M.S.

All graduate students are held responsible for the requirements and academic policies established by the Graduate College and outlined in the front of this catalog. In addition, C&I has established requirements for each of its degree offerings. While these requirements may be obtained from an academic advisor, they are briefly outlined below.

All master's degree programs require a minimum of 36 semester hours of approved studies and an overall minimum GPA of 3.00 in all courses counted toward the degree. Students in the M.Ed. program must either take a comprehensive culminating experience or write a professional paper/project as the culminating activity for this degree. A thesis and its defense are the culminating activity for the M.S.

Master's degrees must be completed within a six-year period, and continuous enrollment must be maintained throughout the six years.

Professional Development Teacher Licensure Programs

C&I professional development teacher licensure programs are designed for individuals who hold a degree in a field other than education and aspire to become elementary or secondary classroom teachers.

Professional Development Admission Requirements

1. Bachelor's degree with overall GPA of 2.75 or above
2. Content course work related to general education core for elementary education or specific subject area teaching fields(s) for secondary education
3. Praxis I Pre-Professional Skills Test with passing scores in reading, writing, and mathematics
4. Passing scores on the Teacher Licensure Examinations for Nevada School Law, Nevada Constitution, and U.S. Constitution or credits in related course work
5. Documentation of immunizations with Admissions <<http://www.unlv.edu/Admissions/immunize.html>>
6. Fingerprinting in compliance with the Clark County School District policy
7. Graduate Licensure Degree Program (GLP). This program is designed for individuals who hold at least an undergraduate degree in a field other than elementary or secondary education and who aspire to earn a master's degree while qualifying for an initial teaching license. Interested students must first apply simultaneously with one application form to the Graduate College and another application form to the Department of Curriculum and Instruction.
 - a. Graduate Licensure Elementary (K-8). This program is intended for individuals who wish to secure teacher licensure at the elementary level (K-8). Students must meet prerequisite admission requirements and once admitted attend classes and field experiences as a full-time graduate student. The program includes upper-division course work leading to licensure, full-time student teaching, and then completion of graduate course work to meet requirements of the M.Ed. while employed as an elementary teacher.
 - b. Graduate Licensure Secondary (7-12). This program is intended for individuals who wish to secure teacher licensure at the secondary level (7-12). Students must meet prerequisite admission requirements and once admitted attend classes and field experiences as a full-time graduate student. The program includes upper-division course work leading to licensure, full-time student teaching, and then completion of graduate course work to meet requirements of the M.Ed. while employed as a secondary teacher.

For further information regarding program requirements and the application process, contact the Professional Development Office for Graduate Licensure Programs (PDGLP) in the Department of Curriculum and Instruction, CEB 367A, (702) 895-1536 or online at <<http://ci.unlv.edu>>

8. Initial Licensure Program (ILP). This program is designed for individuals who hold at least an undergraduate degree in a field other than elementary or secondary education and who aspire to qualify for an initial teaching license in a fast-paced, one-year intensive program with enrollment in undergraduate classes and field experiences (per student request, a less intensive two-year plan is acceptable). Interested students must apply to the Office of Admissions. Applications will be forwarded to the Department of Curriculum and Instruction.
 - a. Initial Licensure Elementary (K-8). This program is intended for individuals who wish to secure teacher licensure at the elementary level (K-8). Students must meet prerequisite admission requirements and once admitted attend classes including student teaching for three consecutive semesters. The program includes undergraduate course work leading to licensure followed by full-time student teaching.
 - b. Initial Licensure Secondary (7-12). This program is intended for individuals who wish to secure teacher licensure at the secondary level (7-12). Students must meet prerequisite admission requirements and once admitted attend classes including student teaching for two to three consecutive semesters. The program includes undergraduate course work leading to licensure followed by full-time student teaching. For further information regarding program requirements and the application process, contact the Professional Development Office for Initial Licensure Programs (PDILP) in the Department of Curriculum and Instruction, CEB 367A, (702) 895-1536 or online at <<http://ci.unlv.edu>>.

Specialist in Education in Curriculum and Instruction (Ed.S.)

The Ed.S. degree program is designed for individuals who possess the ability and desire to pursue advanced graduate work beyond the master's level.

Admission Requirements for Ed.S.

In addition to the credentials required by the Graduate College, admission to the Ed.S. program in Curriculum and Instruction also requires the students:

1. Hold a master's degree in education or in a field related to education;
2. Present evidence of a minimum of two years of professional experience appropriate to the selected area of emphasis;
3. Have a minimum GPA of 3.00 in all graduate-level course work;
4. Submit test results from the Graduate Record Exam (GRE General Exam) to the C&I Department;
5. Submit a one- to two-page statement of professional goals mailed directly to Curriculum and Instruction that contains the names of two professional references (Attention: Coordinator of Doctoral Studies);

6. Submit two sets of official transcripts from all previously attended colleges and universities. One set of transcripts must be sent directly to the Graduate College; the other set must be sent directly to the Department of Curriculum and Instruction (Attention: Coordinator of Doctoral Studies).

Applicants will be evaluated on scholastic record, professional accomplishments, and potential for advanced studies. Applicants may be asked to meet with a Graduate Admissions Committee for a formal interview.

Degree Requirements for Ed.S.

The Ed.S. in Curriculum and Instruction requires a minimum of 33 semester hours, a GPA of 3.00 or higher in all course work and a written comprehensive examination and oral presentation of a special project or professional paper.

Students should consult C&I for specifics on program development and requirements.

Doctoral Programs in the Department of Curriculum and Instruction (Ed.D. and Ph.D.) in Curriculum & Instruction and Ph.D. in Teacher Education)

The Ed.D. in Curriculum and Instruction is intended for professional educators who desire to extend and advance their studies in the theory and practice of education. The completion of this degree will enable individuals to become members of university and college faculties as well as leaders in school districts and community agencies.

The Ph.D. in Curriculum and Instruction is intended for professional educators who desire to extend and advance knowledge in the theory and practice of education as university researchers. The completion of this degree will enable individuals to become skilled researchers and mentors of university students, as well as leaders in school districts and community agencies.

Curricular emphasis areas within the Ed.D. and Ph.D. include:

1. Teacher Education;
2. Literacy Education;
3. English as a Second Language/Bilingual Education;
4. Mathematics Education;
5. Educational Technology ;
6. Science Education;
7. Cultural and International Studies in Education.

The Ph.D. in Teacher Education is designed for professional educators who have an interest in becoming practitioner-oriented scholars in teacher education and who are interested in teacher education as a content area for research. Completing this degree will enable individuals to answer the national call for teacher educators and researchers in this field. The program is one of only a few in the nation devoted to teacher education.

Admission Requirements for Ed.D. in Curriculum and Instruction

Applicants for the Ed.D. in Curriculum and Instruction must meet the following criteria in order to be considered for admission as a doctoral student in C&I:

1. Meet the requirements for admission to the Graduate College of the University of Nevada, Las Vegas as set forth in the *Graduate Catalog*;
2. Hold a master's degree from an accredited program in an area closely related to the chosen field of specialization. Normally, 18 semester hours in professional education are required;
3. Have a GPA of 3.00 or higher in all graduate-level course work;
4. Have a minimum of two years of successful professional educational experience upon entrance in the program;
5. Submit three letters of recommendation from individuals who know of the applicant's professional background, experience and academic potential. These letters should be sent directly to the C&I Department (Attention: Coordinator of Doctoral Studies);
6. Submit two sets of official transcripts from all previously attended colleges and universities. One set of transcripts must be sent directly to the Graduate College; the other set must be sent directly to C&I (Attention: Coordinator of Doctoral Studies);
7. Submit Graduate Record Examination (GRE) scores for the General Exam. The scores should be sent directly to the C&I Department;
8. Submit a letter of application to the Coordinator of Doctoral Studies of the C&I Department explaining, in detail, the reason(s) for pursuing the Ed.D.;
9. If a writing sample was not completed as part of the GRE, demonstrate writing skills by completing a written theme on a professional subject assigned and evaluated by members of the C&I doctoral faculty. Applicants will write the theme under examination conditions. The theme must be written and evaluated before the required interview. Out-of-state applicants must contact the Coordinator of Doctoral Studies directly to make arrangements for this requirement;
10. Demonstrate oral communication skills through an interview conducted by members of the C&I faculty. Out-of-state applicants must contact the Coordinator of Doctoral Studies directly to make arrangements for this requirement; and
11. Submit a written statement of how the applicant plans to fulfill the residency requirement. Options for residency are listed in the *Doctoral Studies Guide* available on the department Web site.

Admission Requirements for Ph.D. in Curriculum and Instruction

Applicants for the Ph.D. in Curriculum and Instruction must meet the following criteria in order to be considered for admission as a doctoral student in C&I :

1. Meet the requirements for admission to the Graduate College of the University of Nevada, Las Vegas as set forth in the *Graduate Catalog*;

2. Hold a master's degree from an accredited program in an area closely related to the chosen field of specialization. Normally, 18 semester hours in professional education are required;
3. Have a grade point average of 3.00 or higher in all graduate-level course work;
4. Have a minimum of two years of successful professional educational experience upon entrance in the program;
5. Submit three letters of recommendation from individuals who know of the applicant's professional background, experience and academic potential. These letters should be sent directly to the C&I Department (Attention: Coordinator of Doctoral Studies);
6. Submit two sets of official transcripts from all previously attended colleges and universities. One set of transcripts must be sent directly to the Graduate College; the other set must be sent directly to C&I (Attention: Coordinator of Doctoral Studies);
7. Submit Graduate Record Examination (GRE) scores for the General Exam. The scores should be sent directly to the C&I Department;
8. Submit a letter of application to the Coordinator of Doctoral Studies of the C&I Department explaining, in detail, the reason(s) for pursuing the Ph.D.;
9. If a writing sample was not completed as part of the GRE, demonstrate writing skills by completing a written theme on a professional subject assigned and evaluated by members of the C&I doctoral faculty. Applicants will write the theme under examination conditions. The theme must be written and evaluated before the required interview. Out-of-state applicants must contact the Coordinator of Doctoral Studies directly to arrange for this requirement;
10. Demonstrate oral communication skills through an interview conducted by members of the C&I graduate faculty. Out-of-state applicants must contact the Coordinator of Doctoral Studies directly to make arrangements for this requirement; and
11. Submit a written statement of how the applicant plans to fulfill the residency requirement.

Admission Requirements for Ph.D. in Teacher Education

Each applicant must meet all criteria for admission to the Graduate College, as set forth in this catalog. Multiple criteria will be used to ensure that only the most qualified applicants will be admitted to the doctoral program. Candidates will be admitted on the basis of a *composite profile* considering the following factors:

1. Completion of a master's degree in an academic major in the teaching fields or equivalent from an accredited program;
2. Graduate grade point average of 3.00 or higher;
3. Graduate Record Examination scores in verbal, quantitative, analytical writing;
4. Satisfactory teaching experience, preferably licensed
5. Three letters of recommendation;
6. Writing proficiency as evidenced through a scholarly writing sample if a sample was not completed as part of the GRE; and

7. An interview that will enable applicants to demonstrate oral communication skills and to explore their commitment to continuing professional development.

In addition to the above factors, it is desirable for applicants to have experience as a practitioner clinician in pre-service or in-service teacher education program and experience in a professional development school or equivalent.

Admission Process

Once requirements are met, members of the C&I Graduate Faculty will evaluate all evidence for admission submitted by the applicant and then make their recommendations to the entire C&I faculty. The C&I faculty will make a recommendation to the Graduate College, and the Graduate College will send written notice regarding admission to the applicant. Only complete applications will be considered.

Continuing Enrollment

Once matriculated as a doctoral student, the student must enroll in at least three semester hours each term. The work must be related to the student's program or dissertation.

Degree Requirements for Ed.D. in Curriculum and Instruction

Doctoral students in the Ed.D. program must complete a minimum of 69 hours of course work beyond their master's degree. Course work is organized into an emphasis area (27 hours), a cognate (9-12 hours), educational research and statistics (12 hours), internship (6-12 hours), and dissertation (15-24 hours). The doctoral student's advisor must approve all course work. A plan of study must be filed before the completion of 16 hours of course work. Consult the department's Coordinator of Doctoral Studies for further information on the process and procedure for filing a program of study. Specific required and recommended courses for each emphasis area can be found in the *Doctoral Studies Guide* on the department Web site. The Doctor of Education degree is awarded to candidates who complete the following:

1. Maintain an overall GPA of 3.00 or higher for all course work taken at the doctoral level;
2. Complete a minimum of 69 credit hours beyond the master's degree as stated in the candidate's program of study;
3. Complete the residency requirement for the degree through one of the three options available as described in the current *Doctoral Studies Guide* on the department Web site;
4. Attend the C&I Doctoral Colloquium held periodically throughout their years of study;
5. Pass a written comprehensive examination taken before commencing with the dissertation;
6. Complete and successfully defend the dissertation. The candidate must follow the guidelines set forth in Guide to Preparing & Submitting a Thesis or Dissertation available on the Graduate College Web site;

7. File the appropriate graduation forms with the Graduate College; and
8. File the original and two copies of the approved dissertation with the Graduate College and one copy of the dissertation with the C&I Department.

Degree Requirements for Ph.D. in Curriculum and Instruction

Doctoral students in the Ph.D. program must complete a minimum of 72 hours of course work beyond their master's degree. Course work is organized into an emphasis area (27 hours), a cognate (9-12 hours), educational research and statistics (15 hours), internship (6-12 hours), and dissertation (15-24 hours). The doctoral student's advisor must approve all course work. A plan of study must be filed before the completion of 16 hours of course work. Consult the department's Coordinator of Doctoral Studies for further information on the process and procedure for filing a program of study. Specific required and recommended courses for each emphasis area can be found in the *Doctoral Studies Guide* on the department Web site.

The Doctor of Philosophy in Curriculum and Instruction degree is awarded to candidates who complete the following:

1. Maintain an overall GPA of 3.00 or higher for all course work taken at the doctoral level;
2. Complete a minimum of 72 credit hours beyond the master's degree as stated in the candidate's program of study;
3. Complete the residency requirement, which requires an extended period of intensive study and intellectual professional development among a community of scholars in the department, college, and university. Two consecutive semesters full-time during this period are required. Residency experiences preclude working full-time during this period. Residency experiences provide an opportunity to learn in-depth the philosophical and pragmatic dimensions of the Curriculum and Instruction Department. Consult the department's Coordinator of Doctoral Studies for further information on the process of residency approval;
4. Attend the C&I Doctoral Colloquium held periodically throughout their years of study;
5. Pass a written comprehensive examination taken before commencing with the dissertation;
6. Complete and successfully defend the dissertation. The candidate must follow the guidelines set forth in Guide to Preparing & Submitting a Thesis or Dissertation available on the Graduate College Web site;
7. Submit an article for publication in a national refereed journal.
8. File the appropriate graduation forms with the Graduate College; and
9. File the original and two copies of the approved dissertation with the Graduate College and one copy of the dissertation with the C&I Department.

Degree Requirements for Ph.D. in Teacher Education

The Ph.D. in Teacher Education consists of a minimum of 63 credits beyond the master's degree. Of the 63 credits, 21 credits are required courses: six credits are in specific research and inquiry courses and 15 credits are in the required education core. In addition, a teaching internship (6 credits) and a school-based internship (3-6 credits) are required. Of the remaining credits, six are electives in the inquiry and research area and nine credits are in teacher education and teaching/learning electives. In addition, three hours of required research seminar are taken concomitantly with the dissertation. Eighteen-24 hours of dissertation are required. Individual programs of study may exceed the minimum requirements; specific course work will vary depending on the particular teaching field or emphasis that is chosen in teacher education. Specific required and recommended courses can be found in the *Doctoral Studies Guide* on the department Web site.

Completion of the degree requirements for a Ph.D. in Teacher Education includes the following:

1. Maintain an overall GPA of 3.00 or higher for all course work taken at the doctoral level;
2. Complete a minimum of 63 hours of study beyond the master's degree as stated in the candidate's program of study;
3. Complete the residency requirement for the degree by spending at least two consecutive semesters, which may include one summer session, as a full-time student;
4. Attend the C&I Doctoral Colloquium held periodically throughout the years of study;
5. Pass a written comprehensive examination taken before commencing with the dissertation;
6. Complete and successfully defend the dissertation. The candidate must follow the guidelines set forth in the Guide to Preparing & Submitting a Thesis or Dissertation available for the Graduate College;
7. File the appropriate graduation forms with the Graduate College; and
8. File the original and two copies of the approved dissertation with the Graduate College and one copy of the dissertation with the C&I Department.

Courses in the C&I Department:

The following courses are intended for students accepted into degree programs for the M.Ed., M.S., Ed.S., Ed.D., and Ph.D. This is only a listing of courses and is not a student's degree plan. The degree plan must be formally filed after meeting with an assigned advisor. Many classes are limited only to students in the Ed.S., Ed.D., and Ph.D. programs. Advanced graduate students (Ed.S., Ed.D., and Ph.D. students) occasionally may take master's level classes with the approval of their advisors.

Specified 600-level courses may be used in a graduate degree only with the approval of an advisor; these courses primarily are reserved for graduate licensure students.

*C&I Course Numbering Format

CIE - Elementary (K-8)

Pedagogy 700 - 719

Mathematics 720 - 729
Science 730 - 739
Social Studies 740 - 749

CIG - General (K-12)

Pedagogy and Art 700 - 719
Mathematics 720 - 729
Science 730 - 739
Social Studies 740 - 749
Multicultural 750 - 759
Doctoral 760 - 799

CIL - Literacy (K-12)

Literacy 700 - 729
(Reading/LangArts/English)
Library Science 730 - 739
Literature 740 - 749
TESL 750 - 759
Bilingual 760 - 769
Doctoral 770 - 799

CIS - Secondary (7-12)

Pedagogy 700 - 719
Mathematics 720 - 729
Science 730 - 739
Social Studies 740 - 749

CIT - Technology (K-12)

Introductory 700 - 719
Intermediate 720 - 749
Advanced 750 - 769
Doctoral 770 - 799

CIE - Elementary

CIE 701

3 credits

Effective Teaching Strategies

Research basis for developing and implementing instructional strategies and models of teaching for the elementary classroom. Prerequisite: Graduate standing.

CIE 702

3 credits

Improving Classroom Management in the Elementary School

Advanced study in managing various aspects of the classroom including establishing and maintaining positive psychosocial environments; rules, routines, and procedures to minimize disruption; discipline plans; and enriched curricula. Prerequisite: Current teaching certificate.

CIE 703

3 credits

Survey of the Modern Elementary School Curriculum

Current research, influences, trends and issues in the modern elementary school curriculum. Recommended as a culminating course. Prerequisite: Current teaching certificate.

CIE 704

3 credits

Elementary School Curriculum Development in Theory and Practice

Examines the conceptual framework and decision making involved in elementary school curriculum development. Prerequisite: CIE 703.

CIE 720 **1-3 credits**
Topics in Elementary School Mathematics

Examines specific topics and issues in elementary school mathematics. Maximum of six credits accepted toward degree. Prerequisite: ICE 452 or CIE 652 and current teaching certificate or consent of instructor.

CIE 723 **3 credits**
Instructional Methods in Primary Elementary School Mathematics

Study of research-based practices and methods in primary elementary school mathematics education. Prerequisite: ICE 452 or CIE 652 or ECE 352 and current teaching certificate.

CIE 725 **3 credits**
Instructional Methods in Intermediate Elementary School Mathematics

Study of research-based practices and methods in intermediate elementary school mathematics education. Prerequisite: ICE 452 or CIE 652 and current teaching certificate.

CIE 727 **3 credits**
Applications of Technology in K-8 School Mathematics

Research-based study of the integration of technology into the teaching of mathematics in grades K-8. Prerequisite: Three semester hours of course work in educational computing and one 700-level course in mathematics methods or consent of instructor.

CIE 729 **3 credits**
Curriculum Development in Elementary School Mathematics

Emphasizes research and curriculum studies dealing with content and procedures of elementary school mathematics programs. Prerequisite: One 700-level course in mathematics methods or consent of instructor.

CIE 730 **1-3 credits**
Topics in Elementary School Science

Examines specific topics and issues in elementary school science. Maximum of six credits accepted toward degree. Prerequisite: ICE 455 or CIE 655 and current teaching certificate or consent of instructor.

CIE 735 **3 credits**
Instructional Methods in Elementary School Science

Study of research-based practices and methods in elementary school science education. Prerequisite: ICE 455 or CIE 655 and current teaching certificate or consent of instructor.

CIE 739 **3 credits**
Curriculum Development in Elementary School Science

Emphasizes research and curriculum studies dealing with content and procedures of elementary school science programs. Prerequisite: One 700-level course in science methods or consent of instructor.

CIE 740 **1-3 credits**
Topics in Elementary School Social Studies

Examines specific topics and issues in elementary school social studies. Maximum of six credits accepted toward degree. Prerequisite: ICE 458 or CIE 658 and current teaching certificate or consent of instructor.

CIE 745 **3 credits**
Instructional Methods in Elementary School Social Studies

Study of research-based practices and methods in elementary school social studies education. Prerequisite: ICE 458 or CIE 658 and current teaching certificate or consent of instructor.

CIE 749 **3 credits**
Curriculum Development in Elementary School Social Studies

Emphasizes research and curriculum studies dealing with content and procedures of elementary school social studies programs. Prerequisite: One 700-level course in social studies methods or consent of instructor.

CIG - General (K-12)

CIG 700 **1-6 credits**
Curriculum and Instruction

Specialized course in curriculum and instruction designed to develop depth in understanding a current educational topic for the in-service teacher. Maximum of six credits accepted toward a degree.

CIG 704 **3 credits**
Reflective Practice in Teaching

Focuses on the theoretical bases, roles, approaches, and dimensions of teacher reflection. Provides students opportunities for reflective practice to improve teaching. Students acquire important knowledge and basic skills of teacher reflection necessary to be a master teacher.

CIG 705 **3 credits**
Teachers as Action Researchers

Surveys literature on classroom action research as a new genre of research, examines important issues in the field of teacher research, and helps students begin conducting action research in their own classrooms. Students develop an action research project.

CIG 706 **3 credits**
Mentoring Strategies to Improve Teaching

Addresses underlying theory of mentoring and development of mentoring strategies and practices. Aims to improve mentoring practices of experienced teachers working with novice teachers. Prerequisite: Consent of instructor.

CIG 710 **3 credits**
Art History for Art Educator

Study of art history and its relationship to the design and implementation of art curriculum in elementary and secondary education.

CIG 711 **Aesthetics for the Art Educator** **3 credits**
Study of aesthetics and art criticism concepts as curricular content in elementary and secondary art education.

CIG 713 **Instructional Methods in Discipline-Based Art Education** **3 credits**
Study of research-based practices and methods in the teaching of discipline-based elementary and secondary school art education.

CIG 715 **Curriculum and Instruction Culminating Experience** **1-3 credits**
Culminating experience for M. Ed. students. Includes a selection of faculty approved options such as a comprehensive examination, professional manuscript or presentation, e-portfolio project, or other equitable curricular experiences. S/F grading. Prerequisite: Thirty hours graduate course work.

CIG 716 **Reading and Conference** **3 credits**
Independent reading and study conference with assigned professor. Maximum of six credits accepted toward a degree. Prerequisite: Must be approved prior to registration.

CIG 717 **Seminar in Curriculum and Instruction** **1-3 credits**
Current issues in curriculum and instruction addressed through readings and presentation. Maximum of six credits accepted toward a degree. Prerequisite: Admission to C&I Department and 15 hours of graduate course work; or consent of instructor.

CIG 718 **Professional Paper/Project in Curriculum and Instruction** **3 credits**
Culminating activity for M.Ed. students. Paper/project requires the student to identify an educational issues applicable to a professional setting and conduct in-depth study or action research concerning the issue. Maximum of six credits accepted toward a degree. S/F grading only. Prerequisite: CIG 717 and consent of advisor.

CIG 719 **Thesis** **3-9 credits**
Culminating activity for M.S. students. Maximum of nine credits accepted toward a degree. S/F grading only. Prerequisite: Consent of advisor.

CIG 720 **Principles of Learning Mathematics** **3 credits**
Study of research involving cognitive factors that impact the learning of mathematics. Prerequisite: One 700-level course in mathematics methods or consent of instructor.

CIG 721 **Diagnostic Assessment in School Mathematics** **3 credits**
Study of the causes and effects of mathematics learning difficulties, methods and instruments useful in diagnosis and treatment. Evaluation of materials for the correction of mathematics learning problems. Prerequisite: One 700-level course in mathematics methods or consent of instructor.

CIG 750 **Multicultural Education** **3 credits**
Introduces students to topics, issues, research, and practices associated with teaching in a diverse society. Prerequisite: Graduate standing.

CIG 751 **Topics in Multicultural Education** **3 credits**
Examines specific topics and issues in multicultural education. Maximum of six credits accepted toward a degree. Prerequisite: CIG 750 or consent of instructor.

CIG 752 **Theory and Research in Multicultural Education** **3 credits**
Examines research related to current programs, trends and issues relative to student instruction for the purpose of preparing teachers, administrators, and other educators to work with diverse populations. Prerequisite: CIG 750 or consent of instructor.

CIG 761 **Theoretical Foundations of Education** **3 credits**
Examines the historical, philosophical, sociological, and cultural foundations of teaching and learning. Prerequisites: Doctoral status; or consent of instructor.

CIG 762 **Instructional Strategies and Learning to Teach in Higher Education** **3 credits**
Focuses on the past, present, and evolving pedagogical content of teacher education. Topics include: the role and work of the teacher educator, teacher educator curricular issues, and effective teaching strategies for working with adult learners. Prerequisite: Doctoral status. Concurrent enrollment in CIG 791.

CIG 763 **Teaching and Learning to Teach** **3 credits**
Broad overview of the process of learning to teach that begins long before a teacher enrolls in education courses. Explores empirical and conceptual questions about teacher learning across the career. Prerequisite: Doctoral status. Concurrent enrollment in CIG 791.

CIG 764 **Models of Teaching** **3 credits**
Considers the wide variety of approaches to teaching through historical, theoretical and research perspectives. Emphasis on the identification of models of teaching most appropriate to the objectives of individual lessons. Prerequisite: Doctoral status.

CIG 765 **3 credits**
Instructional Design

Trends, issues, and research findings on effective instructional planning, presentation, and evaluation. Prerequisite: Doctoral status.

CIG 766 **3 credits**
Evaluation of Teaching

Survey of current methods in evaluating teaching including summative and formative evaluation; high and low inference instruments; validity, reliability and legal issues; and techniques of data gathering. Explores evaluation as a method of improving instruction. Prerequisite: Doctoral status and EPY 702.

CIG 767 **3 credits**
Human Relations for the Teacher Educator

Inquiry into the role of cultural, racial, and social minorities in education. Prerequisite: Doctoral status.

CIG 768 **3 credits**
Advanced Curriculum Development in Education

Examines variables influencing curricular change, types of curricular designs, and the evaluation of curriculum in schools. Prerequisite: Doctoral status.

CIG 769 **3 credits**
Advanced Curriculum Evaluation in Education

Development and application of evaluation models, instruments, and strategies. Applications of selected models, instruments, and strategies to curriculum program evaluation projects. Requires in-depth evaluation report based on field experience project. Prerequisite: Doctoral status.

CIG 770 **3 credits**
Current Trends and Issues in Education

Contemporary trends and issues in curriculum development, teaching and learning in education. Prerequisite: Doctoral status or consent of instructor.

CIG 771 **3 credits**
Comparative Studies in Learning, Teaching, and Curriculum

Examines relationships between learning, curriculum, teaching, and teacher development within and across different countries and analyzes goals, theoretical assumptions, methodological dilemmas, and implications of such comparisons. Prerequisite: Doctoral status.

CIG 779 **3 credits**
Advanced Seminar in Curriculum and Instruction

Concentrated study of literature on specified topics in curriculum and instruction studies. Specific topic announced in the schedule of classes. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status and consent of instructor.

CIG 780 **3 credits**
Research on Teaching and Schooling

Examines, analyzes, and critiques research literature in contexts and cultures of teaching and schooling, teachers' knowledge and beliefs, school change and teacher change processes, and schooling for diverse learners. Prerequisite: Doctoral status. EPY 702 and CIG 761 or consent of instructor.

CIG 781 **3 credits**
Theories and Research in Classroom Management

Assists teacher educators in exploring major models of classroom management with emphasis on developing strategies to promote teacher growth. Models include behavioristic, humanistic, and cognitive approaches toward managing student behavior. Development of classroom routines, preventive discipline, and organization of classroom environment. Prerequisite: Doctoral status.

CIG 782 **3 credits**
School Climate

Study of research on effective schools relative to school climate; curricular, instructional, psychological, affective, and processing. Emphasis on utilization of research in developing and inservice education. Prerequisite: Doctoral status.

CIG 783 **3 credits**
Theory and Research in School Mathematics

Analysis and evaluation of theories and research in school mathematics methods and curriculum with emphasis on theories and research leading to contemporary programs. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status. Six hours of course work in educational research, one 700-level course in mathematics methods, and consent of instructor.

CIG 784 **3 credits**
Theory and Research in School Science

Analysis and evaluation of theories and research in school science methods and curriculum with emphasis on theories and research leading to contemporary programs. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status. Six hours of course work in educational research, one 700-level course in science methods, and consent of instructor.

CIG 785 **3 credits**
Theory and Research in School Social Studies

Analysis and evaluation of theories and research in school social studies methods and curriculum with emphasis on theories and research leading to contemporary programs. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status. Six hours of course work in educational research, one 700-level course in social studies methods, and consent of instructor.

CIG 786 **1-6 credits**
Individual Instruction in Education

Application of theory, actual research, or replication of studies related to school education. Maximum of six credits accepted toward degree. Must be approved prior to registration. Prerequisite: Doctoral status.

CIG 787 **3 credits**
Individual Instruction in Mathematics Education
Application of theory, actual research, or replication of studies related to mathematics education. Maximum of six credits accepted toward degree. Must be approved prior to registration. Prerequisite: Doctoral status.

CIG 788 **3 credits**
Individual Instruction in Science Education
Application of theory, actual research, or replication of studies related to science education. Maximum of six credits accepted toward degree. Must be approved prior to registration. Prerequisite: Doctoral status.

CIG 789 **3 credits**
Individual Instruction in Social Studies Education
Application of theory, actual research, or replication of studies related to social studies education. Maximum of six credits accepted toward degree. Must be approved prior to registration. Prerequisite: Doctoral status.

CIG 790 **3 credits**
Doctoral Research Seminar
Designed to assist a cohort of doctoral students in varying stages of dissertation development: prospectus writing, research design, data collection, data analysis, and oral defense. Maximum of nine credits accepted toward a degree. Prerequisite: Doctoral status.

CIG 791 **1-3 credits**
Internship in Curriculum and Instruction
Individually structured apprenticeship experience preparing students for future service. Requires up to 50 hour of work experience for each credit earned. Maximum of twelve credits accepted toward a degree. Prerequisite: Doctoral status and consent of instructor.

CIG 799 **3 credits**
Dissertation
May be taken for variable credits over a period of several semesters, with final grade being withheld until the dissertation has been successfully defended. Once a student enrolls in CIG 799, enrollment must be continuous until the dissertation is successfully defended. S/F grading only. May be repeated but only a maximum of 24 credits may be allowed in the student's program. Prerequisite: Consent of advisor. 3-24 credits in increments of three.

CIL - Literacy (K-12)

CIL 701 **3 credits**
Foundations of Literacy Learning
Surveys theories and historical trends leading up to present day literacy instruction. Incorporates application of current research to the methods and philosophies of teaching reading and writing.

CIL 702 **1-6 credits**
Topics in Literacy
Examines specific topics and issues of content, materials, methods, and procedures related to literacy and literacy learning. Maximum of six credits accepted toward a degree.

CIL 703 **3 credits**
Language Acquisition and Development
Explores the nature of children's language acquisition, emphasizing normal development. Incorporates the application of current research to teaching strategies.

CIL 704 **3 credits**
Literacy Instruction for Young Children
Current trends, practices, materials, and methods utilized in grades K-3. Includes language development, reading and writing development, and application of current research. May include field experience. Prerequisite: CIL 701 or consent of instructor

CIL 707 **3 credits**
Whole Language: Theory and Practice
Study of historical development, theoretical underpinnings and practical application of whole language. Prerequisite: CIL 701.

CIL 710 **3 credits**
Content Area Literacy
Development of literacy processes and strategies in content areas. Prerequisite: CIL 701 or consent of instructor.

CIL 711 **3 credits**
Instructional Methods in English/Language Arts
Study of research-based instructional practices in the teaching of English/language arts. Prerequisite: CIL 701 or consent of instructor.

CIL 712 **3 credits**
Instructional Methods in English Education
Designed to connect the study of curriculum theory and research related to the teaching of English with the practices of teacher in the secondary English classroom. Methods for reading, writing, speaking and listening skills addressed.

CIL 713 **3 credits**
Curriculum Development in the English/Language Arts
Emphasizes research and curriculum studies dealing with content and procedures in the English/language arts.

CIL 716 **3 credits**
Teaching Writing
Explores the writing process, evaluation techniques and successful writing programs. Incorporates teaching strategies, application of current research, and role of technology.

CIL 717 **6 credits**
Southern Nevada Writing Project: Invitational Institute
Participants in the SNWP Invitational Institute explore writing and the teaching of writing by engaging in the process themselves, demonstrating effective writing practices, planning school and community-based inquiry, and reading and responding to professional resources. As an invitational institute, application and interview process required.

CIL 720 **3 credits**
Classroom Diagnosis and Instruction of Literacy Difficulties
Methods and materials for accommodating students with literacy difficulties in the regular classroom. Emphasis on informal assessment procedures. Prerequisite: Graduate licensure student and CIL 655 or consent of instructor

CIL 721 **3 credits**
Naturalistic Assessment in Literacy
Examines naturalistic assessment procedures in literacy based on a holistic philosophy. Students expected to field test selected assessment procedures. Strategies for improving instruction presented. K-12 perspective. Prerequisite: CIL 701.

CIL 722 **3 credits**
Practicum in Diagnosis and Instruction of Literacy Difficulties
Practicum in the application of principles, materials, and instructional strategies for teaching students with literacy difficulties. Prerequisite: CIL 721.

CIL 726 **3 credits**
Organization and Supervision of Literacy Programs
For individual serving in or preparing for leadership roles in literacy. Emphasis on the effects of education reform; evaluation of model programs; design, implementation and evaluation of district-wide programs; development of guidelines for staff development. Prerequisite: Fifteen graduate credits in literacy or consent of instructor.

CIL 728 **3 credits**
Literacy Issues for a Diverse Society
Advanced course work focuses on literacy issues for students, including diverse learners from various cultures, socioeconomic backgrounds, and language groups. Prerequisite: Eighteen hours of graduate course work and consent of instructor.

CIL 729 **3 credits**
UNLV Reading Conference
Annual conference to bring together teachers and experts in reading, the related language arts, and reading in the content area. Presentation of timely topics, new teaching techniques and technology-based media. May be repeated. S/F grading only.

CIL 731 **3 credits**
Materials Selection for the School Library
Study of research-based practices and methods of assessing and selecting school library material to meet curricular needs and reading interests and abilities of students. Methods of acquisition include design and implementation of collection development policies and survey of bibliographic tools used in the selection of K-12 materials.

CIL 732 **3 credits**
Reference Methods and Resources
Study of research-based practices and methods of the school library's informational curricular support function including the role of the school library specialist as an information resource consultant, teacher and instructional partner. Examines selected print and electronic reference tools including dictionaries, encyclopedias, yearbooks, periodical indexes and subject area references.

CIL 733 **3 credits**
Technology in the School Library
Examines the issues and methods for the application of library science-based technology in the school library. Prerequisite: Basic computer knowledge or consent of instructor.

CIL 734 **3 credits**
Organization and Classification in the School Library
Introduction to the principles, practices and trends of organizing information in the school library including the classification, cataloging, and processing of materials for effective access and retrieval. Prerequisite: CIL 731 and 732; CIL 733 or concurrent enrollment; or consent of instructor.

CIL 735 **3 credits**
Administration of the School Library
Study of research-based principles and strategies for planning, organizing and administering school library programs and practices related to policy development, budgets, personnel, public relations, facilities planning, and systematic program planning and evaluation. Prerequisite: CIL 734 and concurrent enrollment in CIL 736.

CIL 736 **3 credits**
Supervised Library Practicum
Supervised library practicum under the direction of professional librarians in school settings. Prerequisite: CIL 734 and concurrent enrollment in CIL 735.

CIL 740 **3 credits**
Contemporary Literature for Children and Young Adults
Designed for teachers and librarians. Evaluation, selection, and use of recent literature for children and young adults. May be repeated after a six-year period.

CIL 741 **3 credits**

Multicultural Literature and Materials

Study and critical evaluation of multicultural and multiethnic literature and media for children and young adults. Prerequisite: Course in children's or young adult literature or consent of instructor.

CIL 742 **3 credits**

Literature-Based Instruction

Study and application of principles and techniques of teaching reading and language arts with children's literature (trade books) as primary content. Prerequisite: CIL 740 or CIL 741; or consent of instructor.

CIL 743 **3 credits**

Historical Development of Literature for Children

Survey of the development of literature for children; investigation of social and cultural factors affecting children's reading and the publication of children's books during different periods of United States history; critical analysis of the literary value of children's books. Prerequisite: Course in children's literature or consent of instructor.

CIL 747 **3 credits**

Literary Theories and Children's Literature

Explores various theoretical positions within the framework of literary theory and how these positions have influenced reading and literature instruction. Participants will come to understand a range of perspectives within literary theory and be able to relate these theories to reading comprehension and literacy development. Prerequisites: CIL 740 or CIL 741.

CIL 751 **3 credits**

Methods and Materials for TESL

Methods and materials for teaching English as a second language (ESL). Design, implement, prepare, and evaluate ESL materials.

CIL 752 **3 credits**

TESL Curriculum

Principles of curriculum organization, development and adaptation of TESL curriculum. Prerequisite: CIL 751 or concurrent enrollment or consent of instructor.

CIL 753 **3 credits**

Theories of Second Language Acquisition

Current philosophies and approaches to second language acquisition and instruction; attention to sociocultural influences. Prerequisite: CIL 751 or 761 or consent of instructor.

CIL 754 **3 credits**

TESL Assessment Procedures

Assessment of ESL students; selection of appropriate ESL assessment instruments, their administration, scoring, and interpretation. Prerequisite: CIL 751 and CIL 752 or consent of instructor.

CIL 755 **3 credits**

Linguistic Theory: TESL

General linguistics for the TESL teacher and classroom, focusing on the nature of language, English phonology, syntax, semantics, and language change; introduction to psycholinguistics and sociolinguistics. Prerequisite: CIL 753 or consent of instructor.

CIL 756 **1 credit**

Computer-Assisted Language Learning

Application software for ESL learning, including evaluation of software. Prerequisite: Previous course work or concurrent enrollment in educational computing or consent of instructor.

CIL 757 **2 credits**

TESL Practicum

Supervised field experience in an ESL setting with application of TESL methods, materials, and assessment procedures. Prerequisite: CIL 751 and CIL 752 or consent of instructor.

CIL 761 **3 credits**

Literacy Development in the Bilingual Classroom

Current trends, practices, materials, and methods in literacy instruction in a bilingual (Spanish-English) classroom, including Spanish language development, reading and writing development, and application of research.

CIL 762 **3 credits**

Curriculum Development in the Bilingual Classroom

Principles of curriculum organization, development, adaptation, and implementation of a bilingual (Spanish-English) curriculum. Prerequisite: CIL 753.

CIL 764 **3 credits**

Assessment in the Bilingual Classroom

Assessment of bilingual (Spanish-English) students; selection of appropriate bilingual (Spanish-English) assessment instruments, their administration, scoring, and interpretation. Prerequisite: CIL 753.

CIL 770 **3 credits**

Advanced Practicum in Diagnosis and Instruction of Literacy Difficulties

Advanced practicum in the application of principles, materials, and instructional strategies for teaching students with literacy difficulties. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status or consent of instructor.

CIL 772 **3 credits**

Cognitive Foundations of Literacy

Examines theories and research on cognition related to literacy learning and programs of literacy instruction for adults and children. Required of doctoral students in the literacy emphasis sequence. Prerequisite: Doctoral status.

CIL 774 **3 credits**
**Historical Foundations of Literacy
Research and Instruction**

Examines the historical foundations of literacy research and instruction. Overview of significance of research and theories within literacy and the implications for instruction today. Prerequisite: Doctoral status.

CIL 776 **3 credits**
Social and Political Issues in Literacy

Examines the social and political implications of literacy access and development by investigating the role of literacy in culture, government, economics, technology and its future in society. Prerequisite: Doctoral status. CIL 772 and CIL 774 or consent of instructor.

CIL 782 **3 credits**
Theory and Research in the English/Language Arts

Critical interpretation and evaluation of research and theoretical writing in English/language arts. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status. EPY 702 and 721 or consent of instructor.

CIL 784 **3 credits**
Theory and Research in Literacy

Critical review of major studies in literacy with the student identifying an area or areas which warrant investigation; planning a possible implementation of research proposal. Maximum of six credits accepted toward a degree. Prerequisite: Doctoral status. Six hours of educational research from EPY 718, 721, or 722.

CIS - Secondary (7-12)

CIS 701 **3 credits**
Seminar in Teacher Development

Designed for students entering the Secondary Graduate Licensure program. Examines contemporary trends for developing classroom expertise with observations in a middle or high school setting. Focuses on theory and practice in fostering personal and professional development for inservice teachers. Prerequisite: Graduate standing.

CIS 702 **3 credits**
Practicum: Secondary School Environments

Designed for Secondary Graduate Licensure students. Exposure to contemporary urban educational settings and basic management and planning strategies through structured experiences in a middle or high school settings, supplemented with campus-based instruction. Prerequisite: PPST, CIS 701 and concurrent enrollment in subject area methods and CIS 703.

CIS 703 **3 credits**
Classroom Process and Instruction

Designed to examine effective teaching practices and theories. Students examine research literature in classroom organization and management, instructional planning, classroom contexts and conditions. Provides analyses of the secondary classroom processes, school context, and the community at large. Prerequisite: PPST, CIS 701, and concurrent enrollment in subject area methods and CIS 702.

CIS 704 **3 credits**
Secondary School Instruction

Examines effective teaching practices derived from classroom-based research. Includes instructional planning, instructional strategies, motivational techniques, teaching models, and the teacher-as-researcher. Prerequisite: ICS 450 or consent of instructor.

CIS 705 **3 credits**
Secondary Education Curriculum

Examines the major input variables to curriculum decision-making at the secondary level. Emphasis on the levels of curriculum decision-making, decision implementations, and curriculum evaluation. Prerequisite: ICS 450 or consent of instructor.

CIS 706 **3 credits**
Public Education in the Urban Setting

Analysis of the needs and problems of pupils in the urban school, with special emphasis on the development of relevant curricula and teaching strategies. Field work on a pertinent problem required. Prerequisite: Subject area undergraduate methods course.

CIS 707 **1-3 credits**
Topics in the Teaching of Secondary Subjects

Examines specific topics and issues related to content in secondary subjects. Maximum of six credits accepted toward a degree. Prerequisite: Subject area undergraduate methods course and current teaching certificate or consent of instructor.

CIS 708 **3 credits**
Instructional Methods in the Secondary School

Study of research-based practice and methods related to curricular content in specific secondary subjects. Prerequisite: Subject area undergraduate methods course and current teaching certificate or consent of instructor.

CIS 709 **3 credits**
Curriculum Development in Secondary Education

Introduces problem of conducting systematic inquiry in the curriculum field related to a subject area discipline, including generation of practical programs, curriculum research and theory, innovative proposals, and critical analysis. Current status of field, literature sources, and work of leading scholars. Prerequisite: CIS 708 or consent of instructor.

CIS 710 **3 credits**
Curriculum Evaluation in Secondary Education
Curriculum evaluation for the experienced secondary teacher. Both general and specific curriculum evaluation examined. Field-based curriculum evaluation project related to subject area discipline required. Basic knowledge of statistics, research methodology, and curriculum theory necessary. Prerequisite: CIS 705 or 709 and EPY 702 or consent of instructor.

CIS 716 **3 credits**
Middle School History, Theory, and Philosophy
Study of history, theory, and philosophy of middle school learning environments. Emphasis on application of theory and philosophy to contemporary middle school contexts.

CIS 717 **3 credits**
Instructional Trends for the Middle Level
Study of application of knowledge about instructional strategies, adolescent development, and models of teaching to the middle school context. Students design lessons appropriate for middle-level learners and examine literature on interdisciplinary teaching and middle-level learners. Prerequisite: CIS 716 or consent of instructor.

CIS 718 **3 credits**
Middle School Curriculum Development
Studies application of curriculum development theory to middle school context. Emphasis on middle-level teacher's role in curriculum development. Students examine and develop interdisciplinary teaching units. Prerequisite: CIE 703 or CIS 705 or CIS 709 or consent of instructor.

CIS 719 **3 credits**
Trends in Middle School Research
Assessment of research practices and trends in middle schools. Emphasis on application of research findings to school classroom. Proposals for action research projects in middle school learning environment required. Prerequisite: Three hours course work in research; six hours in middle school education.

CIS 722 **3 credits**
Instructional Methods in Middle School Mathematics Education
Study of research-based practice and methods in middle school mathematics education. Prerequisite: ICE 452 or CIE 652 or ICS 406 or ICS 416 or consent of instructor.

CIS 724 **3 credits**
Instructional Methods in Secondary School Mathematics Education
Study of research-based practice and methods in secondary school mathematics education. Prerequisite: ICS 406 or ICS 416 or consent of instructor.

CIS 728 **3 credits**
Application of Technology in Secondary Mathematics
Study and development of research-based practices and methods of using computer-based technology to teach mathematics in secondary schools. Prerequisite: Three semester hours course work in educational computing and one 700-level course in mathematics methods or consent of instructor.

CIS 738 **3 credits**
Applications of Technology in Secondary Science
Study and development of research-based practices and methods of using computer-based technology to teach science in secondary schools. Prerequisite: Three semester hours course work in educational computing and one undergraduate or graduate course in science methods or consent of instructor.

CIT — Technology Education

CIT 701 **3 credits**
Computers in the Elementary Curriculum
Survey of issues and methods for implementing computer applications in elementary schools.

CIT 702 **3 credits**
Computers in the Secondary Curriculum
Survey of issues and methods for implementing computer applications in secondary schools.

CIT 704 **1 credit**
Annual Nevada Technology Leadership Conference
Annual conference to bring together educators interested in enhancing teaching and learning with computer-based technology. Presentations of timely topics, new techniques and strategies, and the latest hardware and software applications. Maximum of three credits accepted toward a degree. Prerequisite: Course work or experience in computing.

CIT 707 **3 credits**
Current Technology as Mindtools for Education
Examines current technologies as examples of mindtools, research-based devices used to help students think and learn. Explores mindtools as a cognitive model and uses technology as a mindtool while providing students with the requisite skills to implement these tools in a classroom setting.

CIT 709 **3 credits**
Internet for Educators
Examines the potential of the Internet to impact K-Adult education. Explores a wide range of on-line resources and how they can be integrated in the curriculum.

CIT 711 **3 credits**
Desktop Publishing for Educators
Hands-on tutorials and design assignments for using page layout and graphics software to create well designed, effective publications for professional and instructional purposes. Topics include: design principles, layout techniques, graphics and type manipulation, graphics scanning, and desktop publishing projects for the classroom. Prerequisite: Course work in educational technology.

CIT 720 **3 credits**
Integrating Technology in Teaching and Learning
Study of research-based practices and methods of integrating computer-based technology in teaching and learning. Students actively explore educational courseware, student and teacher productivity tools, telecommunications, educational multimedia, and problem-solving software. Prerequisites: Three credits in educational technology or consent of instructor.

CIT 722 **3 credits**
Microcomputer Technology for Educators
In-depth look at how personal computers work. Microprocessors, printed circuit boards, bus structures, storage devices, and display options examined from the perspective of how they impact educational applications, purchasing decisions, and planning. Prerequisite: Three credits in educational technology or consent of instructor.

CIT 743 **3 credits**
Instructional Design of Educational Software
Examines instructional design principles and applies them to the design of instructional software. Explores various theories of learning as they apply to courseware. Prerequisites: CIT 720.

CIT 747 **3 credits**
Telecommunications in Education
Examines the potential of telecommunications to impact adult education. Students actively explore a variety of on-line resources via the Internet and commercial on-line services, ways to successfully integrate use of on-line resources in teaching and learning, and current issues, policies, and trends pertaining to global electronic networking. Prerequisite: CIT 720 or consent of instructor.

CIT 749 **3 credits**
Methods of Teaching Computer Applications
Study of research-based practices and methods of teaching application programs (word processors, data base managers, spreadsheets, graphics programs, and telecommunications software). Emphasis on methods of teaching communications, information management, and information retrieval using application programs. Prerequisite: Three credit hours of course work in educational technology; or consent of instructor.

CIT 751 **3 credits**
Methods of Teaching Structured Programming
Study of research-based practices and methods in the teaching of structured programming emphasizing problem-solving strategies. Prerequisite: Consent of instructor.

CIT 753 **3 credits**
Development of Educational Software
Focuses on current programming languages used in creating educational multimedia. Emphasis on Internet-based applications. Prerequisite: CIT 743.

CIT 763 **3 credits**
Educational Multimedia Production
Culminating activity in computer-based instructional design and development. Project-based course emphasizing problem definition, instructional design, and product development with students evaluated in both process and product. Students also work individually on a set of relevant technical competencies. Prerequisite: CIT 720 and CIT 743 or CIT 753 or consent of instructor

CIT 766 **3 credits**
Management of Educational Computing Facilities and Resources
Advanced course focusing on problems and issues in procurement and management of educational computing applications, desktop workstations, computer laboratories, local and wide area networks, and support services. Consideration given to hardware and software interoperability; security for hardware, software and information; legal issues; health and safety factors; budgeting. Prerequisite: CIT 722.

CIT 767 **3 credits**
Computer-based Technology and Educational Change
Examines issues and trends pertaining to the implementation of computer-based innovations in schools. Includes a review of research on past and current change efforts. Topics covered include staff development, research-based strategies for technology coordinators, and long-range planning for effective change. Prerequisite: CIT 720 or consent of instructor.

CIT 768 **3 credits**
Advanced Telecommunications in Teaching and Learning
Advanced course addressing the theory and practice of implementing telecommunications-based projects in schools. Participants extend skills in creating web-based learning materials with emphasis on pedagogical issues. Topics include advanced search strategies, evaluation of educational web sites, assessment of web-based learning, and future trends for telecommunications applications in schools. Prerequisite: CIT 749 or consent of instructor.

CIT 769 **3 credits**

Advanced Web Design and Development for Educators

Advanced educational web site development with emphasis on web-based programming and user interface design. Development environments such as JavaScript, Perl/ CGI, and brief introduction to Java explored. Prerequisite: CIT 747 and CIT 763.

CIT 770 **3 credits**

Advanced Seminar in Educational Technology Research

Advanced research-based seminar in educational technology. Emphasis on critical review and analysis of the use of technology in teaching and learning. Prerequisite: Doctoral status or consent of instructor.

CIT 772 **3 credits**

Technology and Teacher Education

Examines issues and research on preparing teachers to enhance learning with technology. Topics include ISTE's National Educational Technology Standards for students and teachers, technology integration in methods courses and field experiences, use of electronic portfolios, and online learning in teacher preparation and professional development. Prerequisite: CIT 720 and doctoral status.

CIT 778 **3 credits**

Instructional Design

Trends, issues, and research findings on effective instructional planning, presentation, and evaluation. Prerequisite: Doctoral status or consent of instructor.

CIT 782 **3 credits**

Distance Education Issues and Trends

Study of issues, and trends in Distance Education. Examines distance education history, research, practice, and program/course development. Prerequisite: Doctoral status or consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

CIE 652 Teaching Elementary School Mathematics

CIE 655 Teaching Elementary School Science

CIE 658 Teaching Elementary School Social Studies

CIE 659 Classroom Management for Elementary School

CIG 600 Topics in Teacher Education

CIL 615 Children's Literature in the Elementary Curriculum

CIL 653 Teaching Elementary School Language Arts

CIL 655 Teaching Elementary School Reading

Educational Leadership

Chair

Saddler, Sterling (1998), Associate Professor; B.S., Tuskegee University; M.S., SUNY Oswego; Ph.D., Pennsylvania State University.

Graduate Coordinator

Ackerman, Robert (2000), Associate Professor; B.S., M.A., University of Wisconsin-Oshkosh; Ed.D., Indiana University.

Graduate Faculty

Bomotti, Sally (2005), Assistant Professor-in-Residence; B.A., Duke University; M.A., Ph.D., University of Michigan.

Carlton, Patrick (2000), Professor; A.A., Louisburg College; A.B., M.Ed., University of North Carolina; M.A., Shippensburg University; Ph.D., University of North Carolina.

Chance, Patti L. (1998), Associate Professor; B.A., Ph.D., University of Oklahoma; M.Ed., South Dakota State University.

Crawford, James (2000), Assistant Professor; B.A., University of Colorado-Boulder; M.Ed., University of Idaho-Moscow; Ph.D., University of Missouri.

Hager, James (2004), Professor-in-Residence, B.S., St. Benedict's College; M.S., Kansas State University; Ph.D., University of Iowa.

Hall, Gene (1999), Professor; B.S., Castleton State College; M.S., Ph.D., Syracuse University.

Jordan, Teresa S. (1990), Professor; B.S., Miami University; M.S., Ph.D., Arizona State University.

Kops, Gerald C. (1989), Professor; B.S., University of Wisconsin-Milwaukee; J.D., Cornell University Law School; Ph.D., University of Wisconsin-Madison.

Maldonado, Cecilia (2000), Assistant Professor; B.S., M.S., University of Akron; Ph.D., Pennsylvania State University.

Martinez, Mario (2003), Associate Professor; B.S., New Mexico State University; MBA, University of Texas, Austin; Ph.D., University of Arizona.

McClain, Clifford R. (1988), Associate Professor; B.S., M.S., University of Idaho; Ph.D., University of Nebraska.

McCord, Robert S. (1999), Associate Professor; B.S., M.S., University of Wisconsin-Stout; Ed.D., University of Nevada Las Vegas.

Remington, Ronald K. (2004), Professor-in-Residence; B.A., M.A., Humboldt State University; Ph.D., University of Nevada, Reno.

Robison, Michael S. (2003), Associate Professor-in-Residence; B.S., M.Ed., Ed.S., Ed.D., University of Nevada, Reno.

Rusch, Edith A. (2004), Associate Professor; B.S., University of Wisconsin; M.A., University of Northern Colorado; Ph.D., University of Oregon.

Salazar, Pamela S. (2002), Assistant Professor; B.S., M.S., Ed.D., University of Nevada, Las Vegas.

Steinhoff, Carl R. (1988), Professor; B.A., M.A., Ed.D., Syracuse University.

Wolverton, Maryann (2001), Professor; B.S., Northern Illinois University; M.B.A., Arizona State University; Ph.D., Arizona State University.

Professors Emeriti

- Andersen, Dale G. (1984), Professor, B.S., M.A., Montana State University; M.Ed., University of Southern California; Ed.D., Arizona State University.
- Chance, Edward (1995-1999), Emeritus Professor; B.A., M.S.S., M.Ed., Ph.D., University of Oklahoma.
- Dettre, John R. (1972-1989), Emeritus Professor; B.A., B.S., M.A., Ph.D., Ohio State University.
- Kavina, George (1971-1994), Emeritus Professor; B.S.C., Roosevelt University; M.Ed., National College of Education; Ed.D., University of Arizona.
- Rothermel, Bradley L. (1981-2000), Emeritus Professor; B.S., Northern Illinois University; M.S., Ph.D., University of Illinois, Champaign-Urbana.
- Samson, George (1968-1989), Emeritus Professor; B.A. Assumption College, M.Ed. Springfield College, Ph.D. University of Connecticut.
- Saville, Anthony (1967-1998), Emeritus Professor; B.S., Illinois State University; M.Ed., Ed.D., University of Missouri.

The primary mission of the Department of Educational Leadership is the development of individuals for leadership roles at all levels of education and related business/industrial enterprises. Its scope includes Higher Education Leadership, PK-12 Education Leadership, Sports Education and Leadership, and Workforce Education and Development. Department programs provide theoretical constructs and practitioner training for those interested in careers as public or private education leaders, community college or university faculty, or teachers in physical education or business and industry occupations.

Programs within the Department of Educational Leadership are designed so that students may earn degrees at the master's level with one of the following emphases:

- a. PK-12 education leadership
- b. Higher education leadership
- c. Workforce education and development

And at the specialist and doctoral levels with one of the following emphases:

- a. PK-12 education leadership
- b. Higher education faculty and leadership
- c. Workforce education and development
- d. College student personnel work
- e. Athletic administration

Master of Education/Master of Science

Admission Requirements

Admission to the M.Ed. and M.S. degree programs requires submission of an official copy of the Graduate Record Examination (GRE) or the Miller Analogies (MAT) results and a faculty review of the student's past academic performance. A minimum GPA of 2.75 for all undergraduate work or a 3.00 for the last two years of undergraduate work is required. A completed application and official transcripts of all college-level work must be submitted to the Graduate College. An additional set of official transcripts of all college-level work must also be submitted to the department.

Evidence of a minimum of two years of satisfactory teaching or administrative experience (or equivalent) is recommended. Two letters of recommendation, GRE or MAT

results, and official transcripts must be submitted to the department. For the master's degree programs in PK-12 Education Leadership, there are additional admission requirements. Please check the PK-12 Program Area web site for details: http://education.unlv.edu/Education_Leadership/pk12admin/pk12admin.htm.

For the *Leadership Preparation Program* in PK-12 Education Leadership, there are additional admission requirements, including a formal interview with faculty and a written statement of leadership philosophy. For the *Collaborative Principal Preparation Program* in PK-12 Education Leadership, there are additional admission requirements including a nomination/screening process through the Clark County School District, a formal interview conducted jointly by CCSD and UNLV faculty, and a written statement of leadership philosophy. For the *Workforce Education Development Program*, students must provide evidence of experiences in an area related to their teaching field.

Generally, a maximum of 12 credit hours from another accredited institution may be transferred into a program with graduate program faculty and UNLV Graduate College approval. For students who have been enrolled as a non-degree seeking graduate student and have been taking graduate courses within the UNLV system, a maximum of 15 graduate credits may be applied toward either graduate degree option. In either case, the student's graduate advisor, department chair and Graduate College dean must approve any transfer or earned credit application.

Degree Requirements

In the Department of Educational Leadership there are specific degree requirements that pertain to each program area. They are as follows:

Master of Education Higher Education Leadership Program Description

The Master's of Education in Higher Education Leadership stresses the core knowledge and skills necessary to become an effective leader in any higher educational setting, in addition to those in general-post secondary education environments. Through a commitment to the integration of theory and practice, students receive the breadth of preparation necessary for them to excel in the field.

Degree Requirements

Successful candidates must complete 37 credit hours and a comprehensive project. The course work consists of 28 core hours and nine hours of elective graduate-level work approved in advance by the student's advisor. A three-credit internship and a one-credit capstone experience are included in the 28 required core hours. The capstone enables the candidate to synthesize her/his learning and apply the theory to practice.

For specific information on the Department of Educational Leadership's Higher Education programs, please visit: http://education.unlv.edu/Educational_Leadership/higheredadmin/higheredadmin.htm.

PK-12 Education Leadership

Program Description

PK-12 Education Leadership offers the following programs and certification options:

Collaborative Principal Preparation Program. This master's degree option is a collaborative effort between UNLV and the Clark County School District to prepare school leaders. Students are selected for admission by a committee comprised of both UNLV faculty and CCSD personnel. Students matriculate as a cohort. Students have a mentor, who is a practicing school leader, throughout the course of the program.

Leadership Preparation Program. This master's degree option is a cohort program for preparing school leaders. Student are selected for admission by a committee of department faculty. Students matriculate as a cohort.

PK-12 Master's Program. This master's degree option is a non-cohort program for preparing school leaders where students may select courses on a schedule at their convenience.

Certification Program. This option allows students to take graduate-level courses as a nondegree seeking student in PK-12 in Education Leadership. It provides the opportunity for students to take those courses that lead to the State of Nevada's Administrative Endorsement. Many of these courses are available online through Borderless Access to Training and Education (BATE), a consortium of universities that provide administrative certification courses. See BATE web site at: http://education.unlv.edu/Educational_Leadership/bate.htm.

Degree Requirements

The Master of Education degree in PK-12 Education Leadership requires a minimum of 39 semester credit hours. A minimum of 36 hours must be in courses prefixed EDA, and all courses in the program shall be at the graduate level (numbered in the 700 series). The Praxis exam for Education Administration and Supervision is required as an exit competency either during the final semester or in the next semester after the completion of all course work. Nevada Administrative Endorsement requires 36 semester credit hours. Students should contact the Certification Department of the Nevada State Department of Education for current administrative endorsement requirements.

For specific information on the Department of Educational Leadership's PK-12 Education Leadership program, please visit: http://education.unlv.edu/Educational_Leadership/pk12admin/pk12admin.htm.

Workforce Education and Development

The Workforce Education and Development program offers the following concentrations for the Master of Education and/or Master of Science degree:

Concentration I: Workforce Education (M.S. or M.Ed.). This concentration provides advanced study for middle and high school workforce education teachers, as well as advanced study for community college, and other higher education instructors.

Concentration II: Workforce Training and Development (M.S. or M.Ed.). This concentration provides advanced preparation for adult educators in a variety of settings (i.e., corporate and business/industry training and development, governmental training and development, career schools, etc.).

Concentration III: Graduate Licensure in Workforce Education (M.Ed.). This concentration provides initial teacher licensure preparation for individuals who already possess an undergraduate degree in a workforce education subject area and wish to become a secondary teacher in Nevada.

Degree Requirements

Program requirements for the M.Ed. degree requires successful completion of a minimum of 36 credit hours of study according to the respective curriculum options, with a minimum GPA of 3.00 for all combined graduate course work followed by successful completion of a written comprehensive examination, or a professional paper/project. The M.S. degree option requires a minimum of 39 credit hours of study according to the respective curriculum options with a minimum GPA of 3.00 for all combined graduate course work followed by successful completion and oral defense of a thesis.

NOTE: See faculty for specific concentration requirements. For specific information on the Department of Educational Leadership's Workforce Education and Development Program, please visit: http://education.unlv.edu/Educational_Leadership/workforceed/worforceed.htm.

Specialist in Education

Program Description

The Specialist in Education (Ed.S.) degree is designed to provide students an opportunity to seek greater in-depth understanding of selected aspects of administration beyond the master's level in administration. The student is expected to pursue a program that concentrates on one of the subdisciplines within Educational Leadership. The emphasis in courses at the specialist level will be upon interpretation, application, and analysis of knowledge.

Admission Requirements

Admission to the Ed.S. program requires that the candidate meet the leadership requirements for admission to the master's program and complete the following:

1. Fulfill the requirements for a master's degree in educational administration or the equivalent, taking any courses necessary to meet these requirements in addition to courses specified for the Specialist in Education degree.
2. Present evidence of two years of appropriate experience as a teacher or an administrator-supervisor. In evaluating applications for admission in this program, the department committee will give consideration to the following factors:
 - a. Evidence of satisfactory professional experience.
 - b. Evidence of writing ability and facility in verbal expression.
 - c. Verification of a master's degree in educational administration or the equivalent.

Degree Requirements

The Ed.S. degree requires a minimum of 32 semester credit hours of graduate course work beyond the master's degree. Academic background deficiencies may require the completion of supplemental course work in addition to the 32 program hours.

1. Complete a minimum of 18 credit hours prefixed EDA or EDH.
2. Specialize in one area appropriate to the field of study, i.e., finance, law, supervision, organizational development, leadership, workforce education, etc.
3. Complete a minimum of three hours of internship. Students who have had no administrative experience will be required to complete six hours or more of practicum or internship under departmental supervision.
4. Complete a minimum of six credits selected from a field other than educational administration.
5. Prepare a professional paper.
6. Maintain an overall 3.00 GPA.
7. Pass a comprehensive examination either during the final semester or in the next semester after the completion of all course work.

Doctor of Education

Program Description

The Ed.D. degree is practitioner-oriented and tailored as much as possible to the professional needs of the individual student. Students may choose one of three options: (1) higher education leadership, (2) PK-12 educational leadership, and (3) the executive leadership cohort program for experienced and currently practicing PK-12 administrators.

Admission Requirements

In the first step, prospective students must first apply for admission through the university's Graduate College. After an initial evaluation, the Graduate College forwards all of the materials to the Department of Educational Leadership for review. Current application deadlines are posted on the department program areas websites. Minimum admission requirements for UNLV's Graduate College include:

1. Completed application and nonrefundable admission and application fee;
2. One copy of official transcripts from all institutions attended after high school, including verification of a master's degree in educational administration or an approved equivalent.

For more information about the Graduate College, please visit: <http://graduate.college.unlv.edu>.

In the second step, additional materials must be submitted directly to the Department of Educational Leadership. They include:

1. Evidence of a master's degree from an accredited college or university or an approved equivalent;
2. Copies of all college transcripts with degrees posted;
3. Three letters of professional recommendation;
4. Satisfactory composite scores on the Graduate Record Examination's General Test;
5. A current professional resumé or vita; Professional experience in leadership positions;
6. Verification of administrative or teaching experience or comparable employment in higher education/PK-12 Education or related field. Executive cohort candidates must submit evidence of current leadership position in PK-12 setting;
7. Evidence of writing ability such as a master's thesis, professional paper, published journal article, or departmental skills test, the department skills test may be scheduled through the department secretary;
8. Evidence of entry-level technology skills;
9. Appropriate professional aspirations reflected in a personal statement.

After a review, the appropriate program faculty within the department will select students for interviews with departmental faculty based upon the application materials submitted to the Graduate College and the department. Each candidate's final admission decision relies on an evaluation of all application materials including the interview.

NOTE: University and Community College System of Nevada employees are eligible to seek application into the program only upon the clarification of conditions relating to conflict of interest as stated in university and department policies. For detailed information regarding admission, contact the department.

Degree Requirements

Degree requirements of the Ed.D. may be found under the following individual program area degree descriptions.

Higher Education Leadership

Program Description

The Doctor of Education in Higher Education emphasizes the specialized knowledge and practical skills required by effective practitioners in institutions of higher education as well as related settings.

Degree Requirements

The Ed.D. degree requires a minimum of 69 credits beyond the master's degree. The program requires candidates complete a common 18-credit hour core that provides the basis for understanding contemporary higher education; 15 hours of core preparation in research methods; 12 elective credits selected in consultation with the student's advisor; a nine-credit hour "Practitioner Experience" designed to prepare candidates through exposing students to the three common administrative units of every campus; academic organization, finance and administration; and student personnel services. The degree program also includes an additional 15 hours of internship and dissertation credits. In addition to the general requirements, and subject to the constraints noted, the student must complete all degree requirements within six calendar years of matriculation in the program. The residency requirement is met by enrollment of 30 semester hours within a 24-month period. Students must also be continuously enrolled for at least three semester hours of course work each semester; the courses must be related to the students' program or dissertation. Students must file a course of study with the Graduate College before the completion of 15 credit hours. For additional information about the program, contact the department or visit the Department of Educational Leadership's Higher Education Program Area Web site: http://education.unlv.edu/Educational_Leadership/higheredadmin/higheredadmin.htm

PK-12 Leadership Cohort

Program Description

The PK-12 educational leadership doctorate is a cohort program. It provides the theoretical framework and practical training needed for those interested in careers as public or private school administrators or in other fields calling for educational leadership. The program's professional training stresses visionary leadership, collaborative problem solving, interpersonal and intergroup relations, and effective communication. A unique feature of the program permits students to establish residency during two consecutive summers and makes extensive use of internship and practicum experiences. It is flexibly structured, thus allowing the candidate to combine work on the degree with performance on the job, eliminating the need for extensive leaves of absence from work.

Degree Requirements

The program consists of a minimum of 60 credit hours of study beyond the master's degree, including the completion of a dissertation, which represents a minimum of 12 of those credits. It includes a two-summer residency core of 21 credit hours. Students also must be continuously enrolled for at least three semester hours of course work throughout their program; the courses must be related to the student's program or dissertation. Students must file a course of study with the Graduate College before the completion of 15 credit hours. Students must complete all degree requirements within six calendar years of matriculation in the program. For additional information about the program, contact the department or visit the Department of Educational

Leadership's PK-12 Program Area Web site: http://education.unlv.edu/Educational_Leadership/pk12admin/pk12admin.htm

Executive Leadership Cohort

Program Description

The Executive Leadership Cohort focuses on current and future educational challenges to enhance the knowledge and skill development of mid-career public school leadership in their current and future leadership positions. This program utilizes a problem-based learning approach that consists of a series of compressed thematic seminars in which emphasis is placed on identifying and developing solutions to real-life problems of practice. Additionally, this program provides for the interaction between students and faculty to determine the precise content and problems of practice that will be pursued under each broadly defined theme. Courses are offered in a weekend format. Summer session days are negotiated with each cohort.

Degree Requirements

The minimum program consists of 60 credit hours of study beyond the master's degree, which includes 12 credit hours for dissertation study. Executive doctoral students are required to participate in a one-week internship with a school district or education agency outside their own employment during the spring semester of their first year of course work. Students also participate in a one-week federal education seminar in Washington, D.C. during the spring semester of their second year of course work. In addition to regular course fees, an additional fee of \$600 per semester is required in this program and covers textbook and supplementary materials, breakfast and lunch for Saturday classes, and travel and lodging for the Washington, D.C. seminar. The residence requirement is met by enrollment of 30 semester hours of course work throughout their program; the courses must be related to the student's program or dissertation. Students must complete all degree requirements within six calendar years of matriculation in the program. For additional information about the program, contact the department or visit the Department of Educational Leadership's PK-12 Program Area Web site: http://education.unlv.edu/Educational_Leadership/higheredadmin/higheredadmin.htm

Doctor of Philosophy Higher Education

Program Description

The Doctor of Philosophy in Higher Education embraces the concept that successful educational leaders must be well-informed individuals who use context in combination with theory, research and data to guide their decision-making. The objectives of the program are to: 1) prepare students for positions of leadership in institutions of higher education and other learning and policy development environments; and 2) assist advanced graduate students in the development of skills in assessment and evaluation, research design, and quantitative and qualitative

methodologies appropriate for leadership roles as faculty or administrators in higher and postsecondary education.

Admission Requirements

Entrance to the Ph.D. program requires candidates to complete three steps. Current application deadlines are posted on the Web site.

Prospective students must first apply for admission through the university's Graduate College. After completing an initial evaluation, the Graduate College forwards all of the materials to the Department of Educational Leadership for review.

Minimum admission requirements for UNLV's Graduate College include:

1. Completed application for admission and the nonrefundable application fee;
2. One copy of official transcripts from all institutions attended after high school, including verification of a master's degree from an accredited college or university.

For more information about the Graduate College, please visit its page at: <http://graduatecollege.unlv.edu>

Additional materials each candidate must submit directly to the Department of Educational Leadership include:

1. Personal Statement of Professional Aspirations;
2. A professional resume' or vita;
3. Verification of experience in higher education or related field is recommended;
4. Scores from the Graduate Record Exam (GRE) or the Graduate Management Test (GMAT) no more than five years old;
5. Three letters of nomination/reference;
6. Evidence of writing ability; see Web site for specifics;
7. Evidence of entry-level technology skills.

In the final step after reviewing all material, viable candidates will be invited to attend an interview with departmental faculty members. The interview enables candidates to demonstrate their oral communication skills, commitment to continuing professional development, and to show their leadership, learning and educational philosophy. Final admission will be based on evaluation of all application materials including the application interview.

For specific information on the Department of Educational Leadership's Higher Education Ph.D. programs, please visit: http://education.unlv.edu/Education/Educational_Leadership/higheredadmin/higheredadmin.htm

Degree Requirements

This terminal degree requires students to complete a minimum of 72 semester hours of course work beyond the earned master's degree, including the dissertation. Residency is met by enrollment in a minimum of 30 semester hours within a 24-month period. In addition to content and research core (36 credits), an internship and the dissertation (18 minimum hours), successful students will spend nine elective credit hours specializing in one of five areas (administration, faculty/professional, college student personnel, or workforce education and development). A feature of this degree

program is the opportunity to pursue an area of interest outside the Department of Educational Leadership.

PK-12 Leadership

EDA 700 **1-6 credits**

Special Problems in Educational Administration

Specialized areas of instruction in educational administration designed to emphasize understanding and depth in current administrative procedures. Maximum of six credits toward a degree accepted in any approved special problems courses in the College of Education.

EDA 701 **3 credits**

Introduction to Educational Administration

Study of the structure of American education, including administrative concepts and forces that affect the administrative role.

EDA 702 **3 credits**

Organization and Administration of Schools

Study of the organization and administration of schools including elementary, middle, junior and high schools. Prerequisite: EDA 701 or consent of instructor.

EDA 704 **3 credits**

Organization and Administration of Secondary Schools

Study of the organization and administration of the secondary school, including middle, intermediate, and junior high school levels. Prerequisite: EDA 701 or consent of instructor.

EDA 705 **1-3 credits**

Field Experience in Educational Administration

Allows graduate students to participate and observe within the school administrative setting. Open only to, and required of, students pursuing a master's degree in educational administration. Concurrent enrollment in specific administrative courses required: EDA 702, EDA 710, EDA 740. May be repeated to a maximum of three credits.

EDA 706 **3-6 credits**

Selected Problems in Educational Administration

Identification of current problems in administration and development of solution strategies. May be repeated to a maximum of six credits.

EDA 707 **3-6 credits**

Critique of Research in the Administrative Process

Survey and analysis of data pertinent to research in educational management. May be repeated to a maximum of six credits.

EDA 708 **3-6 credits**

Seminar: Educational Management

Seminar exploring various aspects of school administration/ leadership. May be repeated to a maximum of six credits.

EDA 709 **3 credits**
Readings in Educational Administration
Selected readings germane to the field of administration.
Prerequisite: EDA 701.

EDA 710 **3 credits**
Supervision of Instruction
Study of principles, strategies and techniques utilized to evaluate performance and improve instruction in educational settings. Prerequisite: EDA 701 or consent of instructor.

EDA 711 **3 credits**
Supervision in the Secondary Schools
Study of principles, strategies, and techniques utilized to evaluate performance and to improve instruction in the middle and secondary schools. Prerequisite: EDA 701 or consent of instructor.

EDA 713 **3-6 credits**
Problem Areas in Educational Supervision
Group work employed to isolate current problems in supervision and to develop and propose solutions to the specific problems. May be repeated to a maximum of six credits. Prerequisite: EDA 701 or 711 or equivalent.

EDA 714 **3 credits**
Critique of Research in the Supervisory Process
Identification, selection, and analysis of research pertinent to the field of supervision.

EDA 720 **3 credits**
Public School Finance
Theory and practice of financing public education in the United States. Emphasis on sources of support, methods of distribution, and current practices. Prerequisite: EDA 701 or consent of instructor.

EDA 721 **3-6 credits**
Seminar in School Business Administration
Principles and practices in budget making and execution; management of internal accounts; development of an effective records system; purchase, distribution, and management of supplies; and operation and maintenance of the school plant and auxiliary services. May be repeated to a maximum of six credits. Prerequisites: EDA 701, 720, and consent of instructor.

EDA 722 **3 credits**
Seminar in Public School Finance
In-depth and advanced study of selected issues and problems in educational finance. Prerequisites: EDA 720 and consent of instructor.

EDA 737 **3-6 credits**
Readings in Educational Supervision
Selected readings germane to the field of supervision. May be repeated to a maximum of six credits.

EDA 738 **3 credits**
Interscholastic and Intercollegiate Athletic Programs
(*Same as PED 732.*) Designed to study educationally relevant aspects of interscholastic and intercollegiate athletic programs. Topics include growth and development of athletic programs, governing bodies, athletics in education, philosophical reform, recurrent problems, athletes and the student movement, Title IX, sport, politics and education, and NCAA compliance.

EDA 740 **3 credits**
Administration and Curriculum Improvement
Clarifies role of the administrator in improving curriculum and instruction in the public schools.

EDA 741 **3 credits**
The Administrator and Ancillary Services
Prepares students for administrative responsibilities of both quantitative and qualitative services provided in schools. The variety of student needs at the school level requires the use of specialists in guidance, social work, psychologists, health personnel, and many other clinicians. Each role must be coordinated within the school operation by the administrator. Prerequisite: Consent of instructor.

EDA 742 **3 credits**
Professional Internships in Athletics
(*Same as PED 746.*) Supervised field experience in athletic management. Actual experience working in athletic programs and participating in functions associated with same. May be repeated to a maximum of six credits. Prerequisites: Admission to program in physical education and approval of advisor.

EDA 745 **3-6 credits**
Human Dynamics and Organizational Leadership
(*Same as HOA 745 and BUS 745.*) Provides students with knowledge, skills and attitudes necessary to undertake leadership responsibilities in complex organizations. Applies concepts and methodologies from the social and behavioral sciences in the analysis of leadership behavior in diverse organizational and community settings. May be repeated to a maximum of six credits.

EDA 746 **3 credits**
Public Relations Problems for Schools
Principles and practices pertaining to methods of working effectively with people in the school and community.

EDA 747 **3-9 credits**
Urban School Administration
Emphasis placed on administration, development, and organization of areas specific to education in the urban settings. a) Social, political, and power groups within the urban setting. b) Nature of the urban setting utilizing a problem-solving approach. May be repeated to a maximum of nine credits.

EDA 749 **3-6 credits**
Rural School Administration
Emphasis placed on administration, development, and organization in areas of specific concern to the administrator in a small school setting. Includes the rural setting in its political and social mode, power structures in the (rural) small school setting, utilizing a directed or problem-solving approach. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

EDA 750 **3 credits**
School Personnel Administration
Emphasis on the nature of personnel administration. Organization for handling personnel problems, group processes, and development of personnel policies relating to salary and working assignments, in-service improvement, and professional relations. Prerequisites: EDA 701 and consent of instructor.

EDA 751 **3 credits**
Public School Negotiations
Statutory provisions, personnel policies, staff and administrative responsibilities in the professional negotiation process. Prerequisite: Consent of instructor.

EDA 755 **3 credits**
School Law: Cases, Concepts, and Practice
Designed to inform students of various legal authorities and their impact on education and administrative practice. Scope includes various legal dictates from constitutions, cases, policies, and opinions. Prerequisite: EDA 701 or consent of instructor.

EDA 762 **3 credits**
The Educational Plant: Surveys and Facilities
Studies master planning, educational surveys, site selection, specifications, and construction of school plants. Variety of activities provided to encompass aspects of equipment and ongoing maintenance of educational facilities. Prerequisite: EDA 701 or consent of instructor.

EDA 770 **3-6 credits**
Individual Instruction in Educational Administration
Provides opportunity for graduate students to select, delimit, and research problems in educational administration. May be repeated to a maximum of six credits.

EDA 771 **1-6 credits**
Seminar in Educational Administration
Designed for graduate students preparing for leadership positions in public schools. a) Curriculum. b) Administration. c) Supervision. d) Evaluation. e) Advanced Methodology. f) Research. g) Public Relations. h) Finance. i) School Plant. j) Professional Negotiations. k) School Law. l) Materials for Simulation. m) School Personnel. Variable credits determined by consent of instructor.

EDA 772 **3-6 credits**
Seminar in Supervision for Administrators in Various Roles
Designed for graduate students preparing for, or occupying, leadership roles in private and public education, professional schools, and educationally related enterprises. a) Elementary School, b) Middle and/or Junior High School, c) High School, d) Higher Education, e) Director, f) In-service Education. The above sections may be taken for three credits each with a maximum of six credits utilized.

EDA 773 **3-6 credits**
Seminar: Constructs of Theory in Educational Administration
Designed to enable teachers and administrators to understand theory and to apply theory in problem solving.

EDA 774 **3-6 credits**
Advanced Seminar: Topics in School Management
Specific topic selected from a school management area. In-depth study provided to post-master's students who seek to explore and refine further their administrative skills. Topics to be announced. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

EDA 775 **3 credits**
Educational Futures and Educational Administration
Consideration of futurist thoughts, theories, processes, and predications as these may serve to influence the process of administering public education in tomorrow's schools.

EDA 780 **3 credits**
Organization and Administration of Vocational Education
Treatment given to the organization and administration of the special field of vocational education in secondary schools and adult vocational programs.

EDA 781 **3-6 credits**
Individual Instruction in Adult and Teacher Education
Selected basic problems related to teaching at the college or university level as well as adult education programs. Includes areas such as administration, supervision, evaluation, research, public relations, finance, school plant. May be repeated to a maximum of six credits with consent of instructor.

EDA 782 **3-6 credits**
Seminar in Teacher Education
Enables students interested in professional work in colleges and universities to select appropriate topics for in-depth study. a) Administration. b) Supervision. c) Evaluation. d) Research. e) Public Relations. f) Finance. g) School Plant. m) School Personnel. n) Curriculum. May be repeated to a maximum of six credits with consent of instructor.

EDA 785 **3 credits**

Administering Schools in a Political Climate

Enables students to understand the political process in administration, to develop strategies for coping in a political climate, and to utilize concepts of power and influence in the school community.

EDA 788 **1-6 credits**

Independent Study in the Doctoral Program

Provides the opportunity for a doctoral degree student to select and study a particular area of concentration with mutual approval of the instructor.

EDA 789 **1-3 credits**

Introduction to Computing for School Administrators

Survey of the current instructional and administrative uses of microcomputers in K-12 schools. Includes instruction in fundamentals of computer operation, classification of software, purchasing and management topics, and issues related to implementation and faculty development.

EDA 790 **3-9 credits**

Internship

Individually structured program in which the student is given an assignment in an administrative unit under joint supervision of an educational administrator and a university faculty member. Prerequisite: Consent of instructor.

EDA 791 **3-12 credits**

Practicum in Educational Administration

Designed to permit a post-master's student, or one who currently occupies a position of leadership, to function in a supervised setting. Open primarily to doctoral students or others if deemed appropriate by the advisor. May be repeated to a maximum of 12 credits. Prerequisite: Consent of advisor and department.

EDA 796 **3 credits**

Prospectus for Dissertation

Selection and preparation of an experience acceptable to and appropriate for the student, program, and advisor. Open to doctoral students only. Prerequisite: Consent of advisor.

EDA 797 **3 credits**

Professional Paper

S/F grading only.

EDA 799 **3-24 credits**

Dissertation

Preparation of an appropriate document utilizing salient features which best portray the experience selected in EDA 796 and offers data in the form found most suitable for defense before a panel or committee should it be required. Open only to doctoral students. A minimum of 12 hours required; a maximum of 24 credits allowable. May be taken in three-credit hour increments. Prerequisites: EDA 796 and consent of advisor.

Higher Education Leadership

EDH 702 **3 credits**

Organization and Administration in Higher Education

Study of the organization and management of higher education including administration of the two-year college program.

EDH 703 **3 credits**

History of American Higher Education

Surveys the history of American higher education in the United States with a focus on two-year and four-year institutions, public and private. Begins with its traditional liberal arts origin through the growth of the community college and American research university. Explores how various groups changed the structure of higher education and the challenges these changes created. Prerequisite: Graduate standing.

EDH 704 **3 credits**

Executive Communications

Master's level course on the administrative and communication aspects of effective leadership within a higher education setting. Equips students with the tools necessary to be effective communicators with various audiences via letters, memorandums, E-mail messages, presentations, and meetings.

EDH 705 **3 credits**

Fundamentals of College and University Organization

Master's level course that provides an introduction to the purposes, goals, and structures of institutions of higher education. Provides a broad view of managerial functions and an understanding of organization, finance, and other issues related to college administration.

EDH 706 **3 credits**

Foundations of American Higher Education

Assists graduate students in higher education in developing understanding of and appreciation for philosophical and sociological contexts that provide foundation for present system of higher education in America. Prerequisite: Consent of instructor.

EDH 707 **3 credits**

Designing & Critiquing Research In Education

Helps Ph.D. students become more thoughtful about the goals and methods of educational research. Develops in-depth understanding of research design and awareness of issues considered when critiquing research findings. Prerequisites: EPY 702 or equivalent.

EDH 708 (Formerly EDW 746) **3 credits**

The American Community College

Development of the contemporary community, junior, and technical college. In-depth examination of history, philosophy, curriculum, and structure of the two-year college. Includes related curriculum topics. Prerequisite: Consent of instructor.

EDH 710 **3 credits**
Finance and Budgeting in Higher Education

For students who expect to spend their careers in higher education. Provides understanding of the principals related to the economics of education including why society invests in colleges and universities.

EDH 715 **3 credits**
Theory of Educational Organizations

Intense discussion in understanding how higher educational organizations function. Students examine these roles as they relate to the performance of higher education administrators.

EDH 728 **3 credits**
Leadership Development Seminar

Analyzes leadership functions related to educational organizations, leadership and management theory and the impact of human resources. Special emphasis placed on use of teams in higher education

EDH 732 **3-6 credits**
Readings in Administration of Higher Education

Selected readings of literature in higher education; assigned topics in the areas of organization, administration, finance, and/or supervision, agreed upon by both advisor and student. May be repeated to a maximum of six credits. Prerequisites: EDA 701 and 731 or consent of instructor.

EDH 734 **3 credits**
Readings in Student Personnel Issues

Explores in detail all aspects of college student personnel work by conducting an extensive review of writings related to theory, practice, and program management. Prerequisite: Consent of instructor.

EDH 736 **3-6 credits**
Problems in Supervision at the Postsecondary Level of Education

Group work employed to isolate current problems in supervision and to develop possible solutions to the specific area. May be repeated to a maximum of six credits. Prerequisite: EDA 701 or consent of instructor.

EDH 737 **3-6 credits**
Supervision at the Postsecondary Level of Education

Study of principles, policies, and procedures relevant to personnel having supervisory responsibility for personnel in other areas. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

EDH 750 **3 credits**
Special Topics in Higher Education

Exposes students to and helps them understand special topics that impact and influence higher education. Variety of special topics offered: student financial aid, enrollment management, academic organization and leadership, and student diversity. Prerequisite: Consent of instructor.

EDH 751 **3 credits**
Law: Cases, Concepts, and Practice

Informs students of various legal authorities and their impact on higher education and administration. Includes review and analysis of legal dictates including federal and state constitutions, statutes, case law policies, and administrative rules.

EDH 752 **3 credits**
Higher Education Law

Designed for graduate students preparing for leadership positions in public schools.

EDH 760 **3 credits**
Curriculum Development in Higher and Post-Secondary Education

Examination of the origins, components, and purposes of the academic curriculum in higher education. Emphasis on role of faculty in curriculum development.

EDH 761 **3 credits**
Organizational Leadership of Multicultural Change

Provides students with opportunity to reflect on experiences, examinations of theory, and practical application of organizational leadership within the context of diversity.

EDH 762 **3 credits**
College Student Personnel Services

Introduction to the field of college student personnel services and the role of CSPW within institutions of higher education. Reviews development of the profession and assessment of current developments.

EDH 764 **3 credits**
Student Learning and Development

Explores how students learn and develop. Strategies to facilitate learning by college students analyzed. Focuses on application of student development theory.

EDH 768 **3 credits**
Campus Environments and Student Assessment

Familiarizes students with the relationship between campus environment and student learning.

EDH 769 **3 credits**
Diverse Student Populations in Higher Education

Investigates traditional assumptions, including that college makes a difference and explores student-related issues, study of campus cultures, and study of diverse student populations.

EDH 773 **3 credits**
Seminar in the Economics of Higher Education

Designed to expose students to the basic principles of micro economics and fundamental economic theories that tie to education. Students have opportunity to experiment with economics as a tool for examining higher education policy. Prerequisites: Completion of doctoral core, consent of instructor.

EDH 780 **3 credits**

Seminar: Teaching in Higher Education

Weekly seminars in organization, materials, and procedures related to working with college-level students. Includes survey of various teaching techniques, evaluation, and general patterns of instruction.

EDH 783A **3 credits**

Law and the Professorate

Legal aspects of the relationship between university faculty and the institution. Prerequisite: EDH 752.

EDH 783B **3 credits**

Legal Aspects of Student-University Relationship

Advanced issues course that explores topics relevant to the legal aspect of the student-university relationship. Prerequisites: EDH 752

EDH 785 A,B,C **3-9 credits**

Practitioner Experience Seminar

Follows a three-course sequence that combines seminar discussions along with limited practical experience in an administrative office or department of a postsecondary institution. The three seminars center on academic affairs, student services and finance, and administration. Prerequisite: Completion of doctoral core.

EDH 787 **3 credits**

Politics in Higher Education

Theoretical and working knowledge of politics in higher education. Students gain appreciation, understanding and critique of politics and its influences on policy formation.

EDH 790 **3 credits**

Internship

Individually structured program designed to enroll the student in an administrative unit or academic experience under the joint supervision of a practicing administrator or faculty member and a university professor. Prerequisite: Doctoral Core, consent of instructor.

EDH 791 **3 credits**

Independent Study

Research in area of unique interest in college student personnel work. Research conducted in cooperation with instructor. Prerequisite: Consent of instructor.

EDH 792 **3 credits**

Public Policy in Higher and Post-Secondary Education

Focuses on decision making and public policy formation in higher education. Roles of state and national policy-making process studied in depth. Prerequisite: Consent of instructor.

EDH 796 **3 credits**

Dissertation Proposal Preparation

Acquaints students with resources available to graduate students in conceptualizing, proposing, conducting and reporting research proposals. Prerequisites: EDH doctoral core or consent of instructor.

EDH 798 **1 credit**

Master's Capstone Experience

Provides an integrative, synthesizing experience for students culminating in a written examination or an Option II Paper. Draws on and integrates concepts from previous courses and work experiences to ascertain the big picture perspective of higher education. Only one credit may count toward degree plan. S/F grading.

EDH 799 **3-12 credits**

Dissertation

Culminate research analysis and writing toward completion of dissertation and subsequent defense. Prerequisites: Limited to doctoral candidates, consent of instructor.

Workforce Education

EDW 700 (Formerly ICG 700) **1-6 credits**

Special Problems in Workforce Education

Designed to develop depth in understanding a current educational topic for the in-service teacher. Maximum of six credits accepted toward a degree from special topics courses.

EDW 704 (Formerly ICS 704) **3 credits**

Performance-Based Education

Introduction to performance-based instruction. Basic specification of performance-based objectives, development of objectives at the appropriate levels of the cognitive, affective and psychomotor domains, development and evaluation of instructional packages: a) junior/middle schools, b) senior high schools, c) adult and postsecondary education. Prerequisite: Three credits in instructional methodology or consent of instructor.

EDW 712 **1-6 credits**

Problems in the Teaching Workforce Education

Primarily for students who have completed undergraduate methods courses. Research projects required for each student in his or her field of special interest. a) Secondary. b) Postsecondary. May be repeated to a maximum of six credits.

EDW 714 **3 credits**

Policies and Practices in Workforce Training and Development

Introduction to major concepts, skills, and techniques required by corporate, business, industry trainers to facilitate and support organizational change. Explores models and methods for analyzing policies for corporate training and development. Prerequisites: EDW 737 or consent of instructor.

EDW 719 **3 credits**

Leadership in Workforce Education Programs

Provides insight into the administration and supervision of workforce education programs. Emphasis on establishing role of the workforce administrator/supervisor and development of modern management and personal interaction skills. Theory and principles developed, as well as motivational techniques and MBO.

EDW 730 **3 credits**
History and Philosophy of Workforce Education

Introductory course in workforce education and development who may wish to enter the area of secondary education or postsecondary education. Includes history and philosophy of workforce education and concepts of workforce education organizations.

EDW 731 (Formerly ICS 731 & ESE 710) 1- 3 credits
Workforce Education Externship

Objectives include analyzing instructional content requirements based on workplace skills and competencies. Emphasis on instructional/curricular changes based upon student reflection during site-based experiences. Requires a minimum of fifty hours in a worksite placement. May be repeated to a maximum of six credits.

EDW 733 (Formerly ICS 733) 3 credits
Workforce Education Curriculum and Program Development

Comprehensive program development and implementation and curricular integration of career education in the a) senior high school, b) junior high school, and c) postsecondary and adult education. Includes selection and evaluation of career education materials.

EDW 734 3 credits
Needs Assessments and Training Program Evaluation

Discusses approaches to identifying performance problems in organizations and determining appropriate interventions. Emphasis/focus on evaluation of training programs and development of training solutions.

EDW 735 3 credits
Practicum in Workforce Education

Contemporary public school workforce education settings. Includes structured field experience and campus-based instruction. Prerequisites: EDW 712 or equivalent or consent of instructor.

EDW 737 3 credits
Training in Business and Industry

Introductory course providing overview of roles and functions of the training professional. Ample opportunities to practice facilitation skills. Topics include evolution of training, current paradigms in training and development, media development, and delivery techniques.

EDW 738 (Formerly ICS 738) 3 credits
Curriculum Laboratory in Secondary, Postsecondary, and Vocational Education

Laboratory work in construction of specific instructional units with objectives, content, materials, procedures, and evaluation designed to implement research findings. Emphasis according to individual interest. Prerequisite: ICS 703.

EDW 739 (Formerly ICS 739) 3 credits
Techniques of Secondary, Postsecondary, and Vocational School Curriculum Improvement

Basic methods of determining need for curriculum change, procedures for initiating revision, and processes for restructuring secondary curriculum. Includes needs assessment, goals, objectives, and teaching strategies with emphasis on evaluation procedures for curriculum improvement. Prerequisites: ICS 703 and consent of instructor.

EDW 740 3 credits
Technologies for Improving Human Performance

Concepts and applications of technology-assisted methods for facilitating and delivering instruction in a variety of workforce education and development settings.

EDW 745 (Formerly ICS 745) 3 credits
History and Philosophy of Adult and Postsecondary Education

Introductory course in adult and postsecondary education and adult basic education for the experienced individual wishing to enter this area. Includes history and philosophy of various phases of adult and continuing education, basic instructional concepts of importance in working with the adult, and examination of adult education programs. Prerequisite: Consent of instructor.

EDW 747 (Formerly ICS 747) 3 credits
Workforce Education Teaching

Role and responsibilities of the two-year college teacher, including course curriculum organization and development, teaching methods, and evaluation techniques, with emphasis on unique curriculum needs of the two-year college student. Prerequisites: EDW 746 or consent of instructor.

EDW 748 3-6 credits
Postsecondary and Adult Internship

Supervised teaching internship at the community, junior, and technical college level in an assigned instructional area. Supervised instruction under the direction of both two-year college faculty and department faculty. Application required during semester prior to registration. May be repeated for credit to a maximum of nine credits. Prerequisites: EDW 746, EDW 747 and EDW 733.

EDW 749 3 credits
Professional Internship in Workforce Training and Development

Supervised training internship at a corporate, business, or industry site. Supervised training under the direction of both a corporate trainer and department faculty. Application required during semester prior to registration. Prerequisite: EDW 714, EDW 734, and EDW 737.

EDW 755 **Professional Seminar in Workforce Education** **3 credits**
Various contemporary workforce education issues and topics analyzed from the perspective of the classroom teacher. Topics include diversity in the classroom, resource and funding issues, social, economic and demographic concepts, program management, and strategic planning.

EDW 759 **Professional Seminar in Workforce Training and Development** **3 credits**
Various contemporary training issues and topics analyzed from the perspective of the corporate trainer. Topics include diversity in the workplace, fiscal issues, social, economic and demographic concepts, labor analysis, human resource development, and strategic planning. Prerequisites: Graduate standing.

EDW 763 (Formerly EDH 733) **Readings in Postsecondary Education, Human Resource Development, and Workforce Education** **3 credits**
Acquaints advanced students with major recent issues in postsecondary, human resource and workforce education. Review and critique of current research. Prerequisite: Admitted to program or consent of instructor.

EDW 765 (Formerly EDH 765) **Workforce Education Program Dynamics** **3 credits**
Overview of history of adult education, with particular attention to its historical and philosophical development. Allows students to conceptualize the field as a whole by connecting theory with practice. Prerequisites: Admitted to the program or consent of instructor.

EDW 767 (Formerly EDH 767) **Assessment and Evaluation of Workforce Learning Programs** **3 credits**
Standards, procedures, and policies as they relate to accreditation of professional organizations. Prerequisites: Admitted to program or consent of instructor.

EDW 771 **Reading and Conference** **1-3 credits**
Independent reading and study conferences with assigned professors. May be repeated to a maximum of six credits.

EDW 772 **Seminar in Workforce Education** **3 credits**
Current issues in workforce education addressed through readings and presentations. Intended for master's and educational specialist's degree students who select the professional paper/project (EDW 774) and thesis (EDW 775) as part of their program. Prerequisite: EPY 702.

EDW 774 (Formerly ICG 774) **Professional Paper/Project in Workforce Education** **3 credits**
Culminating activity for M.Ed. students. The paper/project requires the student to identify an educational issue applicable to a professional setting, and conduct an in-depth study or activity concerning the issue. S/F grading only. Prerequisite: Completion of EDW 772 or equivalent, or consent of instructor.

EDW 775 **Professional Seminar in Workforce Education** **3-9 credits**
May be repeated, but only a maximum of nine credits applied to the student's program. S/F grading only. Prerequisite: EDW 772.

EDW 785 (Formerly ICG 785) **Current Trends and Issues in Education** **3 credits**
Contemporary trends and issues in curriculum development, teaching, and learning in education. Limited to students enrolled in specialist or doctoral programs. Prerequisite: Consent of instructor.

EDW 786 (Formerly EDH 786) **Colloquium in Workforce Education and Development** **3 credits**
Leadership trends and issues pertaining to teaching in the twenty-first century, including: organizational development, human resource management, policies and procedures, diversity, grant proposals, funding issues, program management, and strategic planning. May be repeated to a maximum of six credits. Prerequisite: Admitted to program or consent of instructor.

Educational Psychology

Chair

Reynolds, Ralph E. (2000), Professor; B.S., University of Wisconsin; M.S., Arizona State University; Ph.D., University of Illinois.

Assistant Chair

Corkill, Alice Jane (1992), Associate Professor; B.A., M.A., Ph.D., University of Nebraska.

Graduate Coordinator

Putney, LeAnn (1997), Assistant Professor; B.A., Indiana State University; M.S., California State University; Ph.D., University of California, Santa Barbara.

Graduate Faculty

Astramovich, Randall L. (2002), Assistant Professor; B.A., M.Ed., Ph.D., University of North Texas.

Bendixen, Lisa (1999), Associate Professor; B.A., Creighton University; M.A., Ph.D., University of Nebraska-Lincoln.

Crank, Joe (1989), Associate Professor, B.A., Southern Illinois University at Carbondale; M.S., Illinois State University; Ph.D., University of Kansas.

Crehan, Kevin (1975), Professor; B.A., Ph.D., State University of New York, Buffalo.

Hong, Eunsook (1990), Professor; B.A., Hansung University (Seoul); M.S., Ph.D., University of Southern California.

Hoskins, Wendy (2003), Assistant Professor, B.A., William Penn College; M.A., Truman State University; Ph.D., Idaho State University.

Jones, W. Paul (1987), Professor; B.A., M.A., Eastern New Mexico University; Ed.D., New Mexico State University.

Kardash, CarolAnne M. (2001), Professor; B.A., Le Moyne College; M.S., College of St. Rose; Ph.D., Arizona State University.

Krach, Kathleen (2005) Assistant Professor; B.A., University of Georgia; M.A., Ed.S., Ph.D., Texas A&M.

Loe, Scott A. (2003), Assistant Professor; B.S., Arizona State University; M.A., Ph.D., The Ohio State University.

Muis, Krista (2004), Assistant Professor; B.A., University of Waterloo; M.A., University of Victoria; Ph.D., Simon Frasier University.

Nussbaum, E. Michael (1999), Associate Professor; B.A., Pitzer College; M.A., University of California, Berkeley; Ph.D., Stanford University.

Olafson, Lori (1999), Associate Professor; B.A., University of Saskatchewan; B.Ed., M.A., Ph.D., University of Calgary.

Perkins, Peggy G. (1990), Associate Professor; B.S., M.S., Ph.D., Florida State University.

Schraw, Gregory (2000), Professor; B.A., University of Illinois; M.S., Ph.D., University of Utah.

Sinatra, Gale M. (2000), Professor; B.S., M.S., Ph.D., University of Massachusetts.

Smith, Shannon (2004), Assistant Professor; B.A., Eastern Bible College; M.A., Ashland University; Ph.D., Oregon State University.

Staples, Pamela (2003), Assistant Professor in Residence; B.S., University of Maryland; M.A., Ed.S., Ed.D., George Washington University.

Zvoch, Keith (2003), Assistant Professor; B.S., University of Pittsburgh; M.A., Ph.D., University of New Mexico.

The Department of Educational Psychology is dedicated to understanding psychological processes that support learning and the application of principles of psychology to classroom instruction. The department offers master's degree programs in Educational Psychology or School Counseling and an Education Specialist degree in School Psychology. The Master of Science degree in Educational Psychology is designed for the student seeking advanced studies in psychological foundations with the opportunity for specialized study in appropriate areas of interest including the practice of instruction. The Master of Education degree in School Counseling is intended for students seeking to be counselors in educational settings. The Education Specialist degree in School Psychology prepares professional school psychologists. This degree requires a minimum of 65 graduate semester credits, enables the student to practice as a school psychologist in Nevada, and provides preparation for national certification. This Ed.S., approved by the National Association of School Psychologists, integrates theory and research to applied skills for working in schools and other agencies.

The Department of Educational Psychology offers two Ph.D. programs. The Ph.D. in Learning and Technology is designed to enable students to become independent scholars, who are able to make significant contributions to knowledge in the discipline of educational psychology and field of educational technology. The Ph.D. in Educational Psychology prepares independent scholars to make significant contributions to knowledge in specialized areas of educational psychology. Students complete a core of research and learning theory courses, a specialization strand, and an emphasis area. Specialization strands within this Ph.D., are available in foundations (assessment, program evaluation, research, and learning in school domains), school counselor education, and school psychology. The department welcomes applications from individuals interested in Educational Psychology, School Counseling, or School Psychology. For information on current programs see <http://education.unlv.edu/EP>

Admission Requirements for Master's Programs

Admission to graduate studies at UNLV requires a bachelor's degree from an accredited four-year college or university with either a minimum grade point average of 2.75 overall or a 3.00 in the last two years of undergraduate work. Master's degree programs require that an application for admission be submitted to the Graduate College, as well as transcripts from all colleges and universities attended.

Admission to the Master of Science degree program in Educational Psychology and the Master of Education in School Counseling is based on the following criteria:

1. Department application
2. Preference given to students whose scores relate to the 50th percentile or better on the verbal and quantitative sections of the Graduate Record Examination (GRE)
3. Three letters of recommendation
4. One writing sample
5. Transcripts from all colleges and universities attended

Application Deadline:

Applications for *all* programs will be considered once a year. The deadline for receipt of applications is February 1. Application packets may be obtained from the department office, College of Education, Carlson Education Building, Room 221. Applications are also available online at <http://education.unlv.edu/EP/admit.htm>.

Applicants may be admitted under a provisional status if they are deficient in no more than two of the admission requirements. If the applicant is admitted under provisional status, nine hours of course work assigned by the Admissions Committee must be successfully completed. Graduate students in Educational Psychology programs must meet all particular program requirements. Failure to successfully meet the requirements within program timelines may result in probationary status and/or removal from the applicable program. For more information concerning admissions, contact the department.

Master of Science

Educational Psychology Program. The Master of Science in Educational Psychology is appropriate for students seeking the core knowledge, research tools, and educational experiences necessary to succeed in various educational settings. The program is appropriate for elementary, secondary, and special education teachers who wish to enhance classroom skills; students interested in pursuing advanced studies in educational psychology; students interested in obtaining a specialist degree in school psychology; as well as students who plan to apply their skills in government or business settings. Students' individualized programs are tailored with attention to their area of specialization. A minimum of 33 credits is required for the degree. Students must maintain a grade point average of 3.00 or better in the program and a grade of B or better in core course work. The culminating experience for the M.S. degree is the defense of the students' master's thesis or completion of an internship and written comprehensive examination.

Master of Education

School Counseling Program. The Master of Education degree is designed to lead to state licensure for practice as a school counselor in K-12 settings and is granted to those who successfully complete the school counseling program. This program meets endorsement requirements for the State of Nevada and is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The minimum program requirement is 48 semester hours. Students must have a cumulative grade point average of 3.00 or better in the program. Students who receive more than two Cs will be separated from the program. In EPY 712, any practicum or internship, a grade of B- or better must be earned or the course must be repeated. A final examination for the School Counseling program is required for graduation. Students will be reviewed each semester to determine adequate progress and retention in the education program.

School Psychology Program

The School Psychology Program is a Specialist in Education (Ed.S.) offered in the Department of Educational Psychology, College of Education. The program is based upon standards set forth by state and national accreditation organizations and is a nationally approved program. Students pursuing school psychology studies meet credential standards by completing at least 65 semester hours beyond the bachelor's of required and elective graduate-level course work by completing the hours and 1,200 hours of supervised internship. Completion of this program of graduate study enables the student to receive state licensure as a school psychologist in Nevada and the opportunity to gain national certification.

The program adopts the scientist/practitioner model of school psychology. Courses and practica seek to integrate theory and applied skills for working in schools and other educational settings. The primary goal of the school psychology program is to prepare professional school psychologists who can apply psychological principles to ameliorate cognitive, learning, behavioral, and other school-related problems of children and adolescents. Contact the Educational Psychology Department for more information.

Ph.D. in Educational Psychology

The Ph.D. in Educational Psychology is designed to provide advanced studies in educational psychology with three primary strands: 1) Educational psychology with specialty area emphases in educational assessment, program evaluation, research, and learning in school domains, 2) School counselor Education, and 3) School Psychology. This program will provide opportunities for students to become independent scholars who are able to make significant contributions to knowledge in specialized areas of educational psychology where both regional and national need for trained professionals has been identified.

The three strands in the program focus on the outcomes and processes that promote more effective learning in school based and related applications. Students in all strands will take core courses in: 1) research methods and statistics, 2) learning, and 3) advanced studies in a domain of school curriculum, school counselor education, or school psychology. All students will be actively involved in research and research-related activities throughout their program of study. The program will prepare students for a variety of professional careers related to teaching and research in both academic and nonacademic settings. For example, students will be prepared to fill faculty, research, or assessment positions at academic institutions, such as universities, community colleges, and K-12 school districts. Representative occupations include educational psychologist, program evaluator, director of school counseling, school counselor educator, educational assessment coordinator, school psychologist, and employee training specialist.

Admission will be limited to the most qualified applicants based on a combination of the following:

1. An undergraduate grade point average of 3.00 or above.
2. If graduate course work has been completed, a graduate grade point average of 3.00 or above.
3. Preference given to scores that relate to the 50th percentile or better on the verbal and quantitative sections of the Graduate Record Examination (GRE).
4. A score of 600 or above on the Test of English as a Foreign Language (TOEFL) is also required for students who do not speak English as their language.
5. Three letters of reference from university faculty or other individuals qualified to judge the applicant's academic potential.
6. The applicant's statement of professional interests and goals.
7. A scholarly or professional writing sample.

Applications for admission will be considered once a year. The deadline for the receipt of applications is February 1.

Program Requirements

The Ph.D. in Educational Psychology requires 67 credits beyond the master's degree. Of the 67 credits, 25 are in courses shared with other doctoral programs in the department. The school counselor education emphasis includes: one credit of proseminar, 15 credits in research methods; 18 in advanced school counselor education, nine in learning theory, 12 in a required emphasis area, and 12 directed toward dissertation completion. The educational psychology track includes one credit of proseminar, 15 credits in research methods, nine in learning theory, 12 in a required emphasis area, 18 credits of electives and 12 directed toward dissertation completion. Individual programs of study may exceed the minimum requirements.

All students must have a master's degree to be considered for admission. Students must maintain a grade point average of 3.00 or better in the program and a grade of B or better in core course work. Students in the school counselor education track enter with a master's degree in a school counseling program accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) or must have completed the substantial equivalent of such program. Students with degrees in other counseling specialties will be considered for admission with the understanding that additional course work will be required as part of their doctoral programs. Students in the school psychology track enter with a specialist degree from a school psychology program approved by the National Association of School Psychologists or must have completed the substantial equivalent of such program. Students without this background may be considered for admission with the understanding that completion of our Ed.S. program in School Psychology, including internship, will be required as part of their doctoral programs.

Program Completion Requirements

Residence Requirements

Students in the doctoral program in Educational Psychology must be enrolled full-time at the University of Nevada, Las Vegas for a minimum of two consecutive

semesters, not including summer sessions, after admission to the doctoral program. Each student's advisor or committee chair and the department's Graduate Coordinator must approve proposed residence periods and courses in advance. Once admitted, the student is expected to enroll continuously, excluding summer sessions. If a program of study must be interrupted, the student may apply for leave status not to exceed one calendar year.

Publication Requirement

After the completion of 36 credits, each student must satisfy a scholarly product requirement (Review I). This requirement can be met in one of two ways: students could submit a research study to a refereed journal; or submit a proposal for a presentation at an annual conference of a national organization. The student must be primarily responsible for conceptualizing, carrying out and report the study in both of these options. The student is responsible for obtaining approval of the product from his or her doctoral committee.

Comprehensive Examination

In the second semester of the second year, each student must take the comprehensive examination (Review II). This second formal assessment is a comprehensive examination that will focus on areas of knowledge that are most relevant to the student's dissertation topic. The student and his/her committee will determine the content of this examination format in that it will focus on in-depth reading and writing directly related to the student's dissertation topic rather than on the student's mastery of previously learned core information.

Dissertation Proposals and Defenses

After successfully completing Review I (i.e., satisfying the scholarly product requirement) and Review II (i.e., passing the comprehensive examination), students can then submit a dissertation proposal to their doctoral committee and submit the accompanying "Dissertation Prospectus" form to the Graduate College. The doctoral committee will meet and determine whether to accept or reject the prospectus. A prospectus can be accepted provisionally given that the student follows the committee's suggestions in the dissertation. Upon completion of the full dissertation, a defense will be scheduled. This defense will be scheduled and conducted in accordance with the Graduate College's policies for thesis and dissertation completion. It is the student's responsibility to file the required "Notification of Oral or Written Examination" form with the Graduate College in a timely manner.

Ph.D. in Learning and Technology

The Ph.D. in Learning and Technology is an academic program with an emphasis on the assessment and understanding of learning outcomes and processes in technology-rich learning environments and in modifying those environments in ways that promote more effective learning. Students take a common core of courses in three specialty areas: research methods and statistics, learning

theory, and technology. Students may structure their program to focus more extensively on learning, technology, or both. The overarching goal of the program is to prepare students to become independent scholars who will contribute to the advancement of the discipline of educational psychology and the field of educational technology. Graduates of the program will be prepared for a variety of professional positions (e.g., university and community college faculty positions, educational psychologists, learning and technology specialists, employee training specialists, program evaluators, educational technology coordinators, and instructional technology specialists).

The doctoral program is interdisciplinary in that it involves faculty from two distinct fields and departments: Educational Psychology and the Educational Computing and Technology Area in the Department of Curriculum and Instruction. This unique collaboration results in a doctoral program built on diverse areas of expertise. Students will graduate with a specialization in educational psychology with an emphasis on using research as a tool for promoting effective learning in electronic learning environments.

Admission Requirements

Admission will be limited to the most qualified applicants based on a combination of the following:

1. An undergraduate grade point average of 3.00 or above.
2. If graduate course work has been completed, a graduate grade point average of 3.00 or above.
3. Preference given to students whose scores relate to the 50th percentile or better on the verbal and quantitative sections of the Graduate Record Examination (GRE).
4. A score of 600 or above on the Test of English as a Foreign Language (TOEFL) is also required for students who do not speak English as their first language.
5. Three letters of reference from university faculty or other individuals qualified to judge the applicant's academic potential.
6. The applicant's statement of professional interests and goals.

Degree Requirements

The Ph.D. in Learning and Technology will consist of 67 credits beyond the master's degree. Of the 67 credits, 37 will be required courses in learning theory, technology, and research methods, 18 will be electives, and 12 will be directed toward dissertation completion. Individual programs of study may exceed the minimum requirements and specific course work will vary depending on particular areas of interest. Student must maintain a GPA of 3.00 or higher for all course work taken at the doctoral level. Students must maintain a grade point average of 3.00 or better in the program and a grade of B or better in core course work.

Publication Requirement: Each student must satisfy a scholarly product requirement. This requirement can be met in one of two ways: students may submit a research study to a refereed journal; or submit a proposal for presentation at an annual conference of a national organization.

Comprehensive Examination: Students must successfully complete a comprehensive examination. This formal assessment will focus on areas of knowledge that are most relevant to the student's dissertation topic. The student and his/her committee will determine the content of this examination.

Residency Requirement: Students must be enrolled full-time at the University of Nevada, Las Vegas for a minimum of two consecutive semesters, not including summer sessions, after admission to the doctoral program. Each student's advisor or committee chair and the Department's Graduate Coordinator must approve proposed residency periods and courses in advance. Once admitted, the student is expected to enroll continuously, excluding summer sessions. If a program of study must be interrupted, the student may apply for leave status not to exceed one calendar year.

Dissertation Proposals and Defenses: After successfully completing the publication requirement and comprehensive examination, students can submit a dissertation proposal to their doctoral committee and submit the accompanying "Prospectus Approval" form from the Graduate College. The doctoral committee will determine the acceptability of the prospectus. Upon completion of the dissertation, a defense will be scheduled and conducted in accordance with the Graduate College's policies for thesis and dissertation completion.

Educational Psychology

EPY 700

1-6 credits

Special Problems: EPY

Specialized instruction in general professional education designed to develop depth in understanding of current EPY problems. May be repeated to a maximum of six credits.

EPY 701

1-2 credits

Proseminar in Educational Psychology

Introduction to graduate studies in educational psychology. Topics may include, but are not limited to: teaching apprenticeship, professional organizations, creating a vita, evaluation and assessment, institutional review board training, peer review process, use of PsychInfo and other topics relevant to graduate studies. Prerequisites: EPY 702 (may be taken concurrently) or equivalent. May be repeated to a maximum of two credits.

EPY 702

3 credits

Research Methods

Early entry graduate-level survey of research methods with emphasis on comprehension of educational research literature. Includes scientific method, locating and summarizing published research, sampling, measurement, statistics, research design, and critique of published research

EPY 703 **3 credits**
Teachers as Producers and Consumers of Educational Research

Entry graduate-level survey of research methods with a dual emphasis on 1) comprehension of educational research literature (teachers as consumers of educational research) and 2) designing and conducting classroom-based research (teachers as producers of educational research).

EPY 705 **2 credits**
Child Counseling

Focuses on children's position in and impact upon the family, emotional development, assessment of behavioral and emotional problems, adjustment issues at school and social/developmental situations. Models of counseling children, models of parent education, and models of parent and school interaction, ethical and legal responsibilities in regard to children, and current research presented. Prerequisite: Graduate standing or consent of instructor.

EPY 707 (Formerly EPY 703) **3 credits**
Adolescent Development

Examines physical, cognitive, social, and moral development of adolescents. Theories of identity development, including ethnic identity development, and their applications to counseling, education, and curriculum development discussed. Social relations, aspects of sexuality, and special problems/issues of adolescence.

EPY 708 **3 credits**
Human Learning and Development

Graduate-level introduction to basic concepts in educational psychology with emphasis on development, learning, and motivation. Prerequisite: Undergraduate degree not in behavioral science or consent of instructor.

EPY 709 **3 credits**
Classroom Assessment

Compares and contrasts traditional and alternative assessment procedures including factors such as: philosophical basis, purposes, roles of teacher, student and administrators, interpreting and reporting results, and strengths and limitations. The role of assessment in promoting learning also discussed. Prerequisite: EPY 707 or EPY 708 (may be concurrent) or consent of instructor.

EPY 710 (Formerly EPY 711) **3 credits**
Survey Methods and Design

Systematic analysis of survey design and research conducted using survey techniques with emphasis on how to effectively plan and conduct mail, electronic, and other self-administered. Prerequisites: EPY 702 or consent of instructor.

EPY 711 (Formerly EPY 751) **3 credits**
Human Growth and Development

Emphasis on implications of human growth and life-span development (childhood through adulthood) for counseling, research and instruction. Topics include prenatal

development and birth, death and dying, and physical, perceptual, cognitive, moral, personality, and language development. Prerequisite: EPC 701 or consent of instructor.

EPY 712 (Formerly EPY 752) **3 credits**
Foundations of Learning and Cognition

Systematic analysis of concepts and principles of human learning with emphasis on their application to instruction and counseling. Topics include classical and operant conditioning, information-processing and memory, the neurophysiology of learning, and personality and social factors in learning.

EPY 716 **3 credits**
Evaluation Research Methods

Addresses the definition and purposes of evaluation research including its potential uses and limitations. Examines models of evaluation research and their application in a variety of settings. Students are strongly encouraged to complete EPY 711 prior to enrolling in this course. Prerequisites: EPY 702 and 721 (may be taken concurrently).

EPY 717 **3 credits**
Analysis of Applied Learning Principles and Educational Media

Introduction to the processes and products of educational media development/selection through the study of contributions, evaluation criteria, and production requirements essential for optimal learning situations. Includes practice in applying learning principles to educational media.

EPY 718 **3 credits**
Qualitative Research Methodologies

Qualitative approaches to exploring phenomena related to educational and other social contexts. Attention given to theoretical and practical considerations of case studies, ethnographies, participant observation and narrative reports; discussion of criteria for establishing goodness of qualitative studies. Field work using qualitative methods required. Prerequisite: EPY 702.

EPY 719 **3 credits**
Advanced Qualitative Research

Qualitative approaches to exploring phenomena related to educational and other social contexts. Analysis of data and presentation of findings. Specific emphasis on analysis of discourses from participant observation and/or interview data. Field work using qualitative methods may be required. Prerequisites: EPY 702 and EPY 718.

EPY 720 (Formerly EPY 790) **3 credits**
Research Design in Education

Principles of research design as applied to empirical data with particular emphasis on quantitative data analysis and interpretation. Includes research design, data collection, data analysis and research report. Prerequisites: EPY 702, EPY 721 and EPY 785 or ESP 760 or ICG 786 and consent of instructor.

EPY 721 **3 credits**
Descriptive and Inferential Statistics: An Introduction
Descriptive indices of central location and dispersion, correlation and regression, hypothesis testing and basic inferential techniques. Emphasis on intuitive understanding and applications in educational/behavioral measurement and research.

EPY 722 **3 credits**
Inferential Statistics and Experimental Design
Intermediate-level coverage of inferential statistics and experimental design analysis covering commonly used techniques in educational and behavioral research with computer applications. Prerequisite: EPY 721.

EPY 723 **3 credits**
Theory and Practice of Human Measurement I
Measurement of human characteristics using applications of classical measurement theory and introduction to the more recent item response theory models. Topics include test planning, scaling, item and test construction, item analysis, reliability and validity. Prerequisite: EPY 721 (EPY 721 may be taken concurrently).

EPY 724 **3 credits**
Theory and Practice of Human Measurement II
Human measurement emphasizing methods of test and trait validation. Topics include factor analysis, discriminant analysis, item response theory, test equating, and current issues in measurement. Prerequisites: EPY 721, 722, 723 (EPY 722 may be taken concurrently).

EPY 725 (Formerly EPY 753) **3 credits**
Item Response Theory and Applications
Introduction to item response theory (IRT) and applications. Models and assumptions, item parameter and person ability estimation, scale construction and selected computer applications of IRT to educational measurement. Prerequisites: EPY 723 and EPY 724.

EPY 726 (Formerly EPY 725) **3 credits**
Advanced Evaluation Research Methods
Addresses application of evaluation research theory and methods through a project-based curriculum in order to provide in-depth examination of essential elements of the evaluation process. Prerequisites: EPY 716.

EPY 728 (Formerly EPY 736) **3 credits**
Applied Classroom Research
Provides students with basic knowledge and skills necessary to conduct research within a classroom. Introduces elements required to begin and conduct an action research project, including purpose/rationale, literature review, data collection, analysis and interpretation, and communicating results. Prerequisites: EPY 702 or EPY 703 and EPY 718.

EPY 729 (Formerly EPY 738) **3 credits**
Qualitative Case Study Research
Focuses on case studies within education. Students conduct in-depth, naturalistic case studies in educational settings to

learn about theory, methodology, and methodological issues relevant to disciplined qualitative case study. Conducting interviews, data collection, coding, and analysis in a qualitative case study design. Prerequisites: EPY 702 and EPY 718.

EPY 730 **3 credits**
Advanced Research Methods
Compares strengths and weaknesses of experimental research designs, using this knowledge to improve design sensitivity. Includes hypothesis testing, threats to validity, power, and effect size. Considers controversies in quantitative research literature. Prerequisite: EPY 702, EPY 721, and EPY 722 (EPY 722 may be taken concurrently).

EPY 732 **3 credits**
Multiple Regression and Path Analysis
Intermediate-level inferential statistics for experimental and non-experimental educational research covering general linear models including analysis of variance, regression (simultaneous, variable-selection, hierarchical approach), and path analysis, integrated with the use of statistical computer packages. Prerequisite: EPY 722.

EPY 733 **3 credits**
Multivariate Statistics
Advanced-level statistics including commonly used multivariate statistical procedures in educational and behavioral inquiries with computer applications. Prerequisites: EPY 721, EPY 722, EPY 730 (EPY 730 may be taken concurrently).

EPY 734 **3 credits**
Latent Variable Models: Factor Analysis and SEM
Designed for those who want to become familiar with applied latent variable modeling and popular computer programs used to carry out the analysis. Topics will include exploratory and confirmatory factor analysis and structural equation models with observed and/or latent variables and with single or multiple groups. Prerequisites: EPY 721, EPY 732 or consent of instructor.

EPY 736 (Formerly EPY 726) **3 credits**
History of Education in the United States
Story of factors and conditions which have been influential in shaping educational thought, ideals, theories, and practices of current American education.

EPY 737 (Formerly EPY 727) **3 credits**
Social Foundations in Education
Study of schools and other socialization agents as they interact within the community and the larger society. Also includes intercultural education.

EPY 738 **3 credits**
Interpretive Analysis of Text and Discourse
Qualitative approaches to text and discourse analysis from different theoretical perspectives will be contrasted. Data from various textual and discourse oriented sources including narratives, audio and/or video tapes, and written

artifacts analyzed in depth through hands-on projects. May include use of software programs specific to qualitative data analysis. Prerequisites: EPY 702 or 703 and EPY 718, or equivalent.

EPY 741 **3 credits**

Essential Relationship Skills for College Teaching

Focuses on developing helping relationships between educators and adult learners. Presents conceptual basis for theories of effective helping, communication skills, conditions and issues affecting helping relationships, educator as reflective practitioner, and self-motivation in adult learners, providing a forum for interdisciplinary interaction common to all helping professionals. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

EPY 745 (Formerly EPY 755) **3 credits**

Categorical/Nonparametric Data Analysis

Introduction to categorical/nonparametric data analysis, for use in small samples or when cases consist of categories or ranks. Topics include contingency tables (including loglinear models), nonparametric tests for ordinal and interval data, logistic and Poisson regression. Project involving analysis of the student's own research data may be required. Prerequisites: EPY 721, EPY 722, and EPY 732.

EPY 746 (Formerly EPY 756) **3 credits**

Multilevel Statistical Models: Theory and Application

Intermediate-level coverage of linear and non-linear multilevel statistical models. Includes coverage of status and growth models. Emphasis on intuitive understanding and practical application. Prerequisite: EPY 721, EPY 722, and EPY 732.

EPY 747 **3 credits**

Large Scale Secondary Data Analysis

Introduction to large scale secondary data analysis. Examination of the promise and pitfalls of working with secondary data sources. Overview of data management and analysis issues. Practical skill development emphasized. Prerequisite: EPY 721, EPY 722, and EPY 732.

EPY 749 **3-6 credits**

Thesis

May be repeated but only six credits applied to the student's program. S/F grading only. Prerequisite: EPY 702.

EPY 757 **3 credits**

Theory and Philosophy of Educational Psychology

Evolution of psychological learning theories, from their philosophical foundations to the present. Central issues include how psychological constructs such as the mind, knowledge representation, and attention impact learning and changes in our understanding of the nature of these constructs over time. Prerequisite: Graduate standing.

EPY 767 **3 credits**

Human Learning and Cognition

Components of human memory and how these components affect learning. Emphasis placed on recent research and theory in working memory and long-term storage. Instructional implications of research discussed, especially with respect to skill acquisition, development of expertise, and cognitive strategy instruction. Prerequisite: Graduate standing.

EPY 768 **3 credits**

Problem Solving, Reasoning, and Expertise

Acquisition of reasoning and problem solving expertise. Emphasis on models of memory and learning and their implications for expert performance in a variety of domains. Discusses issues such as creativity and intelligence, implications of the literature on expert performance for teaching and learning. Prerequisite: Graduate standing.

EPY 770 **3 credits**

Cognition and Instruction

Examines research in the application of cognitive learning principals to instruction in specific domains, particularly reading, writing, mathematics, and science. Research on technological applications especially emphasized. Readings include both foundational and current research. Prerequisite: Graduate standing.

EPY 772 **3 credits**

Contemporary Philosophies of Education

Intensive critical analysis of leading contemporary philosophies of education and their possible implications for practice.

EPY 777 **3 credits**

Cognitive Development

Overview of major theories, issues, and research in cognitive development. Primary emphasis on development of thinking and learning from childhood through adulthood. Prerequisite: Graduate standing.

EPY 780 (Formerly EPY 758) **1-12 credits**

Individual Instruction

Selected basic problems related to the field of counseling services. a) Testing. b) Curriculum. c) Supervision. d) Counseling. e) Area Problems. f) Research. May be repeated to a maximum of 12 credits.

EPY 781 **3 credits**

Research in Educational Psychology

Individual research projects in educational psychology under the direction of a faculty member. May be repeated to a maximum of 12 credits. Prerequisites: EPY 702, EPY 721, EPY 722 and consent of instructor.

EPY 782 **3 credits**

Independent Study

Independent study of a selected topic in educational psychology under the direction/supervision of a faculty member. May be repeated to a maximum of 12 credits.

EPY 783 **3 credits**
Directed Readings in Educational Psychology
In-depth study of a topic through selected readings under the direction of a faculty member. May be repeated to a maximum of six credits. Prerequisite: EPY 767.

EPY 784 **3 credits**
Teaching Practicum
Individual study under the direction of a faculty member focusing on preparing to teach at the college level. Prerequisites: EPY 723 or EPY 767 and consent of instructor.

EPY 786 **1-4 credits**
Applied Systems in EPY
Application of systems approach for evaluation of student personnel services. May be repeated to a maximum of four credits. Prerequisites: EPY 702, EPC 713 or equivalent.

EPY 787 **1-7 credits**
Individual Research
Selected basic problems in personnel services. Prerequisite: EPY 702.

EPY 788 **1-6 credits**
Seminar in EPY
Selected topics in counseling and human development services. a) Principles and practices. b) Individual analysis. c) Occupational information. d) Placement. e) Follow-up evaluation. f) Research. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

EPY 789 **3-12 credits**
Seminar in Learning and Cognition
Selected topics in learning and cognition. Exploration of a specific aspect of learning and cognition. Topics may include, but are not limited to: memory, learning theory, motivation, text processing, individual differences, epistemological beliefs. Prerequisite: EPY 767 or consent of instructor.

EPY 790 (Formerly EPY 779) **1-3 credits**
Research Seminar in EPY
Seminar for the advanced candidate stressing the exploration of current literature and research projects. Prerequisite: Consent of advisor and instructor.

EPY 791 **1-6 credits**
Special Topics in Educational Psychology
In-depth study of special topics in educational psychology stressing the exploration of cutting-edge research on the topic. Topics may include, but are not limited to: false memory, goal theory, self-regulated learning, web-based data collection, discourse analysis. Prerequisite: Consent of instructor.

EPY 793 **3-6 credits**
Advanced Doctoral Practicum
Intense supervision with a restricted client load. Enrollees synthesize and translate clinical skills in supervisory role. Restricted to doctoral candidates. May be repeated to a total of six credits. Prerequisite: Consent of instructor.

EPY 794 **3 credits**
Internship
Final activity intended to provide on-the-job experience in developing related competencies. Successful completion of an internship is a graduation requirement for students who do not select the thesis option for the Educational Psychology master's degree. Prerequisite: Consent of instructor.

EPY 799 **3-24 credits**
Dissertation
Culminating experience that may be: a) traditional, original research, b) field oriented and problem solving, or c) exploratory or generative research. Limited to doctoral candidates. 3-24 credits in increments of three. S/F grading only. May be repeated but only a maximum of 24 credits may be applied towards degree.

Educational Psychology/Counselor Education

EPC 701 (Formerly EPY 707) **3 credits**
Introduction to School Counseling
Introductory course designed to provide students with understanding of the basic roles and functions of the school counselor at the elementary, middle, and high school levels as well as history and current trends in the profession.

EPC 703 (Formerly EPY 706) **3 credits**
Elementary School Counseling
Emphasis on the development of programs to improve classroom atmosphere. Use of total classroom environment to aid in child self-concept development. Methods to aid in problem prevention. School-wide guidance programming.

EPC 711 (Formerly EPY 734) **3 credits**
Counseling Appraisal and Inquiry
Theoretical and practical approach to assessing the individual. Includes development of a framework for understanding individual and group testing; case study approaches; adapting and using questionnaires, surveys, and other assessments to meet local needs; and individual differences including ethnic and cultural and gender considerations. Prerequisite: EPC 701.

EPC 713 (Formerly EPY 744) **2 credits**
Organization and Administration of School Counseling Programs
Study of the need, structure, specialized areas, and evaluation functions of school counseling programs. Emphasized procedures for incorporating personnel services within the educational setting. Meets counselor and certification requirements for organizing and administering guidance services. Prerequisites: Graduate standing.

EPC 715 (Formerly EPY 735) **1 credit**
Orientation to School Counseling
Provides students with information concerning the professional role, function, history, philosophy and practice of counseling. Attention given to the role of the school counselor in the public schools, as well as interactive relationships with teachers, administrators, and other

professionals. Normally taken no later than two semesters following admission to the program. Separate sections for a) elementary and b) secondary. Prerequisites: EPY 701 and admission to the department.

**EPC 721 (Formerly EPY 740) 3 credits
Career Theories and Practices**

Survey of current theories and practices in career counseling. Emphasis on values and decision-making process. Meets program requirements for school, community, and rehabilitation counseling. Prerequisite: EPC 701.

**EPC 723 (Formerly EPY 748) 3 credits
Diagnostic and Prescriptive Counseling Strategies**

Designed to explore variables and intervention strategies with emphasis on assessment-based interventions and focus on brief counseling theories and techniques for school psychologists and other school-based practitioners. Prerequisites: EPY 720 or ICS 737 and consent of instructor.

**EPC 727 (Formerly EPY 712) 3 credits
Counseling Process and Procedures**

Students learn the necessary skills to establish counseling relationships, identify relevant counseling issues, and translate their understanding into an action plan for promoting lasting change. Stages of the counseling process identified, practiced, and applied. Prerequisites: EPC 701.

**EPC 729 (Formerly EPY 704) 3 credits
Relationship Skills in the Helping Professions**

Carkhuff's Systematic Human Relations Training for personnel in helping professions. Helping skills developed to facilitate client self-exploration, which leads to client self-understanding, and finally client action based upon this understanding. Prerequisite: Graduate standing or consent of instructor.

**EPC 731 (Formerly EPY 714) 3 credits
Social Justice and Advocacy in School Counseling**

Seminar course designed to foster awareness, knowledge, and skills for school counseling with diverse student populations. Emphasizes social justice and advocacy in counseling with minority and oppressed students. Topics include culture, ethnicity, nationality, age, gender, sexual orientation, mental and physical abilities, education, family dynamics, and socioeconomic status.

**EPC 733 (Formerly EPY 713) 3 credits
Introduction to Group Counseling in the Schools**

Study and practice of basic approaches to group procedures in relation to group goals, group dynamics and group leadership. Prerequisites: EPC 701 and EPY 723.

**EPC 735 (Formerly EPY 731) 3 credits
Substance Abuse Prevention and Intervention in the Schools**

Physiological aspects of substance abuse. Empirically validated school-based prevention programs, substance

abuse assessment information, counseling techniques, and referral information as well as relapse prevention and aftercare strategies. Prerequisites: EPC 701.

**EPC 741 (Formerly EPY 747) 3 credits
School Counseling Practicum**

Beginning counseling practicum for school counseling students. Under guided supervision, students counsel individuals, conduct groups, and facilitate classroom guidance in an approved school setting. Prerequisites: EPC 701, EPC 723, EPC 727 and EPC 733.

**EPC 743 (Formerly EPY 771) 3 credits
Ethics and Issues in School Counseling**

Presents ethical, legal, and professional issues in school counseling in order to provide students with a basis for professional ethical decision making. Prerequisite: EPC 701.

**EPC 751 (Formerly EPY 776A) 1 credit
Internship in Counseling I**

Final activity in students' programs. Provides the opportunity to engage in all of the activities of a regularly employed staff member in an organization compatible with program emphasis area. Internship activities take place at school sites where interns can work with students appropriate for their program emphasis. Prerequisites: EPC 741.

**EPC 752 (Formerly EPY 776B) 1 credit
Internship in Counseling II**

Final activity in students' programs. Provides the opportunity to engage in all of the activities of a regularly employed staff member in an organization compatible with program emphasis area. Internship activities take place at school sites where interns can work with students appropriate for their program emphasis. Prerequisites: EPC 741.

**EPC 753 (Formerly EPY 776C) 1 credit
Internship in Counseling III**

Final activity in students' programs. Provides the opportunity to engage in all of the activities of a regularly employed staff member in an organization compatible with program emphasis area. Internship activities take place at school sites where interns can work with students appropriate for their program emphasis. Prerequisites: EPC 741.

**EPC 754 (Formerly EPY 754) 3 credits
Supervised Group Practice and Theory**

Group theory and practice as it relates to leadership of personal growth, counseling, and therapeutic groups. Emphasis placed on leadership functions as they relate to group processes. Prerequisites: EPY 715, EPC 741 and EPC 753.

**EPC 760 (Formerly EPY 737) 1-9 credits
Advanced Seminars in School Counselor Education Practice**

Analysis of significant issues in counseling of current and continuing concern. Examination of historical, social, legal and philosophical dimensions of selected problem areas. Prerequisite: Consent of instructor.

EPC 780 (Formerly EPY 780) 3 credits
Counseling Procedures with Substance Abusers
Emphasis on establishing communication with substance abusers. Model of linguistic theory and practice to counsel the abuser individually and with groups provided. Prerequisites: EPY 724, EPY 725, and EPC 735.

Educational Psychology/School Psychology

EPP 710 (Formerly ESP 710) 3 credits
Assessment of Intelligence by School Psychologists
Theory and practice in the use of assessment measures for evaluating intellectual abilities of children, youth, and adults. Prerequisite: Admission to School Psychology Program or consent of instructor.

EPP 715 (Formerly EPY 715) 3 credits
Projective, Personality, and Behavioral Assessment by School Psychologists
Assessment devices used by school psychologist to evaluate student's emotional and behavioral status. Prerequisite: ESP 710 and/or consent of instructor.

EPP 720 (Formerly EPY 720) 3 credits
Problems in Child Development
Application of the principles in child growth and development; interpretation of research and theory of school practices relating student personnel services to the resolution of professional problems in the school. Prerequisite: Graduate standing or consent of instructor.

EPP 750 (Formerly EPY 750) 3 credits
Test Analysis and Inquiry in School Psychology
Functional and theoretical approach for interpretation and inquiry applications with cognitive and affective scales typical in school-based practice. Emphasis on advanced statistical analysis for synthesizing data in diagnostic and validation studies. Prerequisite: EPY 702.

EPP 760 (Formerly EPY 760) 2-6 credits
Contemporary Issues in Human Development
Concentrated analysis of cognitive, linguistic, psychomotor, affective, and social aspects of development. a) Children in the preschool setting, b) Children in the elementary school setting, c) Children in the junior high and high school settings, d) Adult levels from early adulthood to and including the elderly era. May be repeated to a maximum of six credits. Prerequisite: EPY 711.

EPP 761 (Formerly ESP 761) 3 credits
Role and Function of the School Psychologist
Primarily designed for prospective school psychologists but also for those interested in field of school psychology. In-depth survey of field with its related problems and issues. Local, regional, and national issues studied from a practical field perspective. Prerequisite: Consent of instructor.

EPP 762 (Formerly EPY 762) 4 credits
School Psychology Intervention with Practicum
Supervised practice with children in school and clinic settings with intervention recommendations. Prerequisites: ESP 709, 710 and/or consent of instructor.

EPP 763 (Formerly EPY 763) 3 credits
Development and Implementation of Interventions in School Psychology
Advanced course in the development and implementation of interventions used by school psychologists. Prerequisites: EPY 710, 722, 751, 759 and consent of instructor.

EPP 764 (Formerly ESP 792) 1 credit
School Psychology Seminar
Review of issues and research in the field of school psychology. May be repeated to a maximum of four credits. Prerequisite: Consent of instructor.

EPP 765 (Formerly EPY 765) 1-9 credits
Seminars in Selected Advanced Assessment Topics
Designed to provide functional skills in assessment in the diagnosis and evaluation phase of counseling to provide skills in the administration, scoring, and interpretation of clinical instruments. Prerequisite: EPC 715 or EPP 750.

EPP 766 (Formerly ESP 797)
School Psychology Professional Paper
Scholarly paper on a topic pertinent to the profession of school psychology. Prerequisites: Admission to program and consent of instructor.

EPP 769 (Formerly EPY 769) 3 credits
Internship in School Psychology
Supervised school-based experience as a school psychologist intern, may be repeated to a maximum of six credits. Prerequisites: EPP 761 (may be taken concurrently).

EPP 773 (Formerly EPY 773) 2 credits
Social Science Contributions in Education
Utilization of theory, data, and methodology from various social sciences to gain an appreciation and understanding of the forces and interactions among societies, institutions, and individuals in the realm of educational theory and pedagogy. a) Anthropological perspectives. b) Sociological perspectives. c) Economic perspectives. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the Undergraduate Catalog under the corresponding 400 number. Credit at the 600 level normally requires additional work.

EPY 699
Special Topics

Special Education

Chair

Pierce, Thomas B. (1990), Professor; B.S., State University of New York, Fredonia; Ph.D., University of New Mexico.

Doctoral Graduate Coordinator

Miller, Susan (1991), Professor; B.S., Florida Southern College; M.Ed., Ph.D., University of Florida.

Master's Graduate Coordinator

Campbell, Pam (2001), Associate Professor, B.A., University of Massachusetts; M.Ed., Boston College; Ph.D., University of Florida.

Graduate Faculty

Babbitt, Beatrice (1988), Associate Professor; B.A., College of Saint Teresa; M.S., University of Wisconsin, Eau Claire; Ph.D., University of California, Los Angeles.

Dil, Nasim (1977), Professor; M.A., University of Panjab Lahore, Pakistan; M.S., Ph.D., Indiana University.

Filler, John (1980), Professor; B.A., Randolph Macon College; M.A., Wake Forest University; Ph.D., Vanderbilt University.

Gelfer, Jeffrey (1989), Professor; B.A., Wilmington College; M.S., University of Oregon; Ph.D., Florida State University.

Higgins, Amanda Kyle (1991), Professor; B.A., M.A., Ph.D., University of New Mexico.

Nathanson, Rebecca (2000), Associate Professor; B.A., University of California, Los Angeles; M.A., Ph.D., University of California, Santa Barbara.

Navarrete, Lori A. (2002), Associate Professor; B.A., M.A., Ph.D., University of New Mexico.

Sileo, Nancy (1998), Associate Professor; B.A., National University; M.Ed., University of Hawaii, Manoa; Ed.D., University of Northern Colorado.

Strawser, Sherri (1991), Associate Professor; B.S., Indiana University; M.S., Saint Francis College; Ph.D., University of Utah.

Tincani, Matt (2002), Assistant Professor; B.A., West Chester University of Pennsylvania; M.Ed., Temple University; Ph.D., Ohio State University.

Van Norman, Renee (2005), Assistant Professor; B.A., M.S., Temple University; Ph.D., Ohio State University.

Professors Emeriti

Beals, Mark (1969-1992), Emeritus Professor; B.A., Lycoming College; M.A., University of Hawaii; Ph.D., University of Arizona.

Detre, Judith H. (1973-1992), Emeritus Professor; B.S., M.A., Ohio State University; Ed.D., University of New Mexico.

Healey, William C. (1993-2002), Professor; B.S., M.A., Ph.D., University of Missouri.

Kelly, Edward J. (1969-2001), Professor; B.S., Santa Clara University; M.S., Ed.D., University of Oregon.

Ruegamer, Lynne C. (1973-1997), Emeritus Associate Professor; B.A., University of Montana; M.A., Eastern Montana College; Ed.D., University of Idaho.

Van Vactor, John C. (1971-1996), Emeritus Associate Professor; B.A., M.S., Butler University; Ph.D., Purdue University.

Wagonseller, Bill R. (1971-1998), Emeritus Professor; B.A., Wichita State University; M.S., Emporia State Teachers College; Ed.D., University of Kansas.

The Department of Special Education offers graduate degree programs at the master's, specialist, and doctoral levels. All Special Education graduate programs are designed to provide the professional experiences required by teachers, specialists, administrators, and future professors of special education.

Master Degree Programs

The Department of Special Education offers the Master of Education (M.Ed.) and the Master of Science (M.S.) degrees. Both degrees require a minimum of 36 semester hours of study with six semester hours in research (3) and multicultural perspectives (3).

Admission Requirements for M.Ed. and M.S.

In addition to meeting the admission requirements of the Graduate College, as outlined in the front of this catalog, applicants must also meet the requirements established by the Department of Special Education. They are:

1. A minimum grade point average of 2.75 for all undergraduate work or a 3.00 grade point average for the last two years of undergraduate work. Admission to a master's degree program in special education requires that students with a GPA of less than 2.75 be admitted to the graduate program with provisional status;
2. A completed application for admission sent to the Graduate College.
3. Two sets of official transcripts from all previously attended colleges and universities. One set of transcripts must be sent directly to the Graduate College; the other set must be sent directly to the Department of Special Education (Attention: Graduate Coordinator).
4. A one-to-two page Statement of Professional Goals mailed directly to the Department of Special Education (Attention: Graduate Coordinator). The names of two professional references should be included in the statement; and
5. Two letters of recommendation mailed directly to the Department of Special Education (Attention: Graduate Coordinator).

Applications are processed when all credentials required by both the Graduate College and the Department of Special Education have been received by the Graduate Coordinator. The Graduate Coordinator evaluates the applicant's credentials and recommends either 1) admission to full, contingency, or provisional graduate standing (depending on the strength of the applicant's academic credentials; or 2) denial. Those who wish to begin studies but who miss the application deadline may enroll as a non-degree graduate student. However, since there is no guarantee that courses taken as a non-degree student will count toward a degree, and since a maximum of 15 hours taken prior to admission to the program may be used to meet degree requirements, candidates are urged to seek advisement prior to registering for any course(s).

Advisor Assignment and Program of Studies

The Graduate College will mail official written notification of acceptance. In addition, a letter will be mailed from the Department of Special Education identifying the advisor. Students are responsible for contacting their advisors.

Degree Requirements for M.Ed. and M.S.

All graduate students are held responsible for the requirements and academic policies established by the Graduate College and outlined in the front of this catalog. In addition, the Special Education Department has established requirements for each of its degree offerings. While these requirements may be obtained from an academic advisor, they are briefly outlined below.

All master's degree programs require a minimum of 36 semester hours of approved studies and an overall minimum GPA of 3.00 in all courses counted toward the degree. A thesis and its defense are the culminating activity for the M.S.

Master's degrees must be completed within a six-year period and continuous enrollment must be maintained throughout the six years, unless a formal request for a leave of absence is approved by the department and Graduate College.

Degree Requirements: Master of Education

The M.Ed. degree requires at least 36 semester credit hours. Students must complete a minimum of 18 credit hours with the ESP prefix, EPY 702 and pass a written Comprehensive Examination either during or within one year of the final semester of course work.

Degree Requirements: Master of Science

The M.S. degree requires at least 36 semester credit hours. Students must complete a minimum of 18 credit hours with the ESP prefix, EPY 702, a maximum of nine credit hours in electives as approved by the department.

Program Options: M.S. and M.Ed.

M.Ed. and M.S. programs can be designed to meet the needs of persons who hold a baccalaureate degree and wish to earn a master's degree in special education, with or without licensure. Students are expected to develop a plan of study that is most relevant to their educational purposes; ESP 722 and EPY 702 are required by the department for all plans of study. Students seeking a license to teach should be aware that certification or endorsement requirements might limit their choices. A number of specific focus areas are available and can lead to the following Nevada Department of Education endorsements: Autism, Early childhood, Early Childhood special Education, Emotionally Disturbed, Generalist-Mild Disabilities, Gifted and Talented, learning Disabilities, mental Retardation, Teaching English as a Second Language; or other professional areas, such as Applied Behavioral Analysis.

Previous course work included in submitted graduate plans of study must have a grade of B or better. Only two subsequent grades of less than B- (one with an ESP prefix and one with any other prefix) will be permitted in a

submitted plan of study. Under no circumstances will a Grade Point Average (GPA) of less than 3.00 be allowed on a finished plan of study. Failure to meet these standards will result in suspension from the degree program.

Specialist in Education (Ed.S.)

The Specialist in Education degree program is designed for individuals who possess the ability and desire to pursue graduate work. Each applicant for admission to the Specialist in Education program must comply with Graduate College requirements for admission to graduate standing. Approved graduate credit may be transferred toward the specialist degree after the candidate has been admitted.

Admission to this program is based on consideration of the following factors:

1. Biographical data of the candidate including the background of preparation, scholastic record, advanced study, and professional accomplishments.
2. Evidence of professional promise, personal integrity, and success as a teacher or administrator.
3. Evidence of research and writing ability and facility in verbal expression and interpretation of data.
4. Results of specific tests as determined by the departmental committee (i.e., GRE, MAT).

Candidates for the Specialist in Education degree (Ed.S.) are required to complete a minimum of 65 semester hours of graduate course work beyond the bachelor's degree or a minimum of 35 semester hours beyond the master's degree.

Specific requirements include all deficiencies from the master's degree program in the area of the selected specialty. At the committee's discretion, and with its approval, equivalent courses to specific degree requirements may be utilized. Given the needs and abilities of each student, the committee and the individual student determine the number and content of courses in the student's area of specialization.

Students are expected to develop a major program that is most relevant to their education purposes and follow the requirements of their specific areas of emphasis. Minimum course requirements include research and evaluation options. A number of specific program options are available to students, and programs using combinations of various options are encouraged. These program options include:

Areas of Concentration without Endorsements

- a. Administrative and Consultative Operations
- b. Appraisal and Assessment Techniques
- c. Assistive Technology
- d. Parent Training
- e. Research Field Study Programs
- f. Special Curriculum Development
- g. Supervised Field and Internship Experiences

Areas of Emphasis with Endorsements

- a. Early Childhood Special Education
- b. Emotional Disturbance
- c. Learning Disability
- d. Mental Retardation

Doctor of Philosophy (Ph.D.) in Special Education

The Doctor of Philosophy program is designed to emphasize the development of skills in scientific inquiry and educational leadership in special education. Students gain an understanding of philosophy and theory as they relate to various research paradigms. Graduates typically pursue careers in higher education, research centers, and education agencies that require the competencies developed through a Ph.D. course of study.

Admission Requirements

Applicants to the Ph.D. program in special education must complete the Graduate College Application for Admission and arrange to have official transcripts sent to the Graduate College. Applicants must also submit the following materials to the Department of Special Education.

1. A letter of application that clearly articulates professional and research goals that are related to the focus of the Ph.D. degree program in Special Education;
2. Official transcripts of graduate-level courses indicating grade point averages (and receipt of a postbaccalaureate degree in special education or a related field.);
3. Three letters of recommendation -- at least one from an individual familiar with the applicant's academic performance and potential for doctoral degree completion and at least one from an individual knowledgeable of the applicant's quality of work experience;
4. Representative samples of scholarly writing, preferably in APA style, and/or other media samples related to professional study;
5. A résumé of professional preparation and experience (a minimum of two to three years of professional experience in special education, general education or other relevant field as a teacher, administrator or related service provider for children and adults with disabilities and/or giftedness is preferred);
6. Scores from the verbal, quantitative and analytical sections of the Graduate Record Examination (taken within five years from the date of application for admission). The department does not impose minimum GRE scores;
7. Financial aid forms if seeking a Graduate Assistantship; and
8. Other information, such as a personal interview, as requested by the department admissions committee.

It is the student's responsibility to ensure that his/her file is complete. Incomplete files will not be considered. Application materials for U.S. residents requesting financial support are due March 1.

In general, applicants will be expected to have a 3.50 grade point average on all graduate-level work and an indication of potential to complete all requirements of doctoral study successfully (provided through submitted writings or creative products, letters of recommendation and GRE results) to be admitted as doctoral students in special education.

After Admission Committee review, the Doctoral Program Coordinator may recommend to the department faculty that the applicant be: 1) admitted fully to the Ph.D. program in special education, 2) admitted provisionally to the appropriate doctoral program or 3) denied admission to the doctoral program in special education. A recommendation for provisional admission may occur when an applicant has not met the criteria or prerequisites to do advanced graduate-level work. Provisional admission requires the satisfactory completion (e.g., with a minimum 3.50 grade-point average) of nine or more hours in regularly scheduled graduate courses approved by the student's advisor and departmental faculty. After completion of the provisional program, the Doctoral Coordinator and Department Chair recommend to the Graduate College that the student either be transferred to regular status or dropped from the program.

Residency

Doctoral students are required to spend a minimum of two consecutive semesters (Fall-Spring, Spring-Summer or Summer-Fall) in full-time resident study in the Department of Special Education. Full-time resident study is defined as being enrolled in at least nine semester hours of graduate-level course work from an approved Program of Study (six semester hours if the student is a graduate assistant). In cases where residency includes a semester of course work prior to submission of the Program of Study, the advisor must approve residency. Work during residency is allowed. However, if the student is employed as a graduate assistant, any additional work beyond that performed as an assistant must conform to the rules of the university and Graduate College.

Program of Study

The program of study requires a minimum of 72 semester hours. Only credits that meet the following criteria may be included on the formal Program of Study:

1. Those not previously used to fulfill requirements for another degree;
2. Those taken while enrolled at an accredited graduate degree-granting institution in a degree-granting program; or
3. Those taken as a nondegree student (not to exceed 15 total semester hours); and
4. Those for which a grade of B or higher was earned.

In addition, two-thirds of the total semester hours included on the formal program of Study (not including dissertation) must be taken at UNLV. Faculty of the Department of Special Education instructing specialist's and/or master's classes initiate an interaction with doctoral students enrolled in these courses regarding the appropriateness of both the content and performance requirements for doctoral students. Students not admitted to the doctoral program in Special Education (or to another doctoral program in the College of Education) may enroll in only one of the Core Curriculum courses (ESP 760) prior to formal admission.

The Department of Special Education generally tailors its leadership programs to meet the individual student needs and career goals. A content core of courses, however, is *required of all doctoral students*. This content may not be waived. In addition to the core curriculum, students select concentrations in Leadership Studies and Exceptionality Specialties as appropriate. The requirements for the Ph.D. degree are outlined below:

Core Curriculum for Ph.D. Degrees (23 semester hours)

Each doctoral student will complete the core curriculum below:

1. ESP 732 Grant Writing for Human Services (3 semester hours)
2. ESP 750 Philosophical and Ethical Principles in Special Education (3 semester credits)
3. ESP 760 Professional Seminar in Special Education (3 semester hours)
4. ESP 782 Leadership Seminar in special Education (3 semester hours)
5. ESP 783 Single Subject methods in Special Educations (3 semester hours)
6. ESP 784 Seminar in Advanced Special Education Technology (3 semester hours)
7. ESP 785 Issues, Trends, and Futures in Special Education (3 semester hours) Single Subject Methods in Special Education (3 semester hours)
8. ESP 796 Dissertation Prospectus (2 semester hours) (To be taken as an independent study supervised by the advisor)

Doctoral students must earn a grade of B or higher in all core curriculum courses.

Ph.D. Research Course Work (15 semester hours)

- EPY 721 Descriptive and Inferential Statistics (3 semester hours)
- EPY 722 Inferential Statistics and Experimental Design (3 semester hours) or equivalent course work and an additional nine credits in course work (such as)

An additional nine semester hours in research selected from courses such as:

- EPY 790 Research Design (3 semester hours)
- EPY 716 Evaluation Research Methods (3 semester hours)
- EPY 718 Qualitative Research Methodologies (3 semester hours)
- EPY 733 Multivariate Statistics (3 semester hours)
- ESP 791 Research Design in Special Education (3 semester hours)

Research Internship (3 semester hours)

- ESP 794 Internship in Special Education (3 semester hours)

Leadership Studies (18 semester hours*)

Doctoral students complete 18 semester hours in one or more of the following leadership concentrations: Parenting, Administration, Research, Diagnosis/Assessment, Transition, Early Childhood Special Education, Early Childhood Education, Higher Education, Technology, Consultation, Curriculum.

Exceptionality Specialties (18 semester hours*)

Students complete nine semester hours each in two areas with an emphasis on in-depth reviews of research literature, research in the field setting, or in a research externship: Autism, Learning Disabilities, Emotional Disturbance, Mental Retardation, Gifted and Talented Education, Developmental Disabilities/Children at Risk.

Writing Proficiency

Students shall be required to demonstrate doctoral-level writing proficiency beginning with the first doctoral seminar, ESP 760.

Dissertation (12 semester hours)

Upon completion of course work, doctoral students enroll in 12 semester hours of dissertation credit (ESP 799: Dissertation).

*Hours may be reduced based on student's previous academic preparation related to leadership studies and exceptionality specialties. However, under no circumstances will the Formal Program of Studies include fewer than 72 semester hours.

Colloquium

The Special Education Doctoral Colloquium typically is held one Friday each semester. The Doctoral Coordinator coordinates these meetings with the assistance of the special education faculty and doctoral students.

Doctoral Studies Committee

Doctoral students are required to select a faculty member as an advisor and a Doctoral Studies Committee. The committee consists of the student's advisor, who is to have been selected prior to the student completion of 12 semester hours, two other faculty from within the Department of Special Education, and a Graduate College representative. This committee oversees the student's progress, including the comprehensive evaluation process. A temporary advisor may be assigned until a new student becomes acquainted with the faculty.

Comprehensive Examination

The comprehensive examination is taken by the student during the semester immediately preceding enrollment in ESP 799: Doctoral Dissertation. The comprehensive examination consists of 16 hours of written examinations with eight hours structured by the student's major advisor and eight hours structured by the other committee members. The examinations are scheduled on two successive Fridays, the first two Fridays in October or the first two Fridays in March. Students may petition the *Doctoral Program*

Committee (not the individual Doctoral Studies Committee) for permission to take comprehensive examinations in the summer or an alternative set of consecutive Fridays.

The questions on the comprehensive examination address elements of the Core, Research, Leadership Studies, Exceptionality Specialties, and any course work taken for licensure or endorsements. The student's Doctoral Studies Committee provides general parameters from which questions are selected. "Take-home" examinations, in whole or in part, are not allowed. Students may use college-provided technology for word-processing. Grading consists of three categories: Pass, Fail, and Pass with Distinction. Pass with Distinction occurs contingent upon a unanimous vote of the committee excluding the Graduate College representative.

Dissertation Proposal and Advancement to Candidacy

Upon successful completion of comprehensive examinations, the student selects a dissertation committee (i.e., minimum of three faculty members from the Department of Special Education and an outside member appointed by the Graduate College) and submits a dissertation proposal to the committee. This proposal includes an introduction, review of the literature, and a discussion of study methods. Two weeks after this proposal is submitted to the dissertation committee, the committee meets with the student to accept or reject the proposal, as well as provide a critique of its relative strengths and weaknesses. Upon acceptance of the student's dissertation proposal, a recommendation for advancement to candidacy is submitted to the Graduate College.

Dissertation Defense

Upon completion of the full dissertation, a defense is scheduled. Students need to obtain *The Guide to Preparing and Submitting a Thesis or Dissertation* from the Graduate College *web site*.

Doctor of Education (Ed.D.) in Special Education

The Doctor of Education (Ed.D.) program is designed to emphasize the development of educational leadership within the field of Special Education Administration or General Special Education in Higher Education. The Administrative option prepares students to fulfill careers in special education administration, coordination, supervision, curriculum and/or program consultation. The Higher Education option prepares students who already have knowledge and experience in special education or with special populations for careers in higher education.

Admission Requirements

Applicants to the Ed.D. program in special education must complete the Graduate College Application for Admission and arrange to have official transcripts sent to the Graduate College. Applicants must also submit the following material to the Department of Special Education:

1. A letter of application that clearly articulates professional and research goals that are related to the focus of the Ed.D. degree program in Special Education;
2. Official transcripts of graduate-level courses indicating grade point averages (and receipt of a postbaccalaureate degree in special education or a related field);
3. Three letters of recommendation -- at least one from an individual familiar with the applicant's academic performance and potential for doctoral degree completion and at least one from an individual knowledgeable of the applicant's quality of work experience.
4. Representative samples of scholarly writing, preferably in APA style, and/or other media samples related to professional study;
5. A resumé of professional preparation and experience (a minimum of two to three years of professional experience in special education, general education, or other relevant field as a teacher, administrator or related service provider for children and adults with disabilities and/or giftedness is preferred);
6. Scores from the verbal, quantitative and analytical sections of the Graduate Record Examination (taken within five years from the date of application for admission). The department does not impose minimum GRE scores;
7. Financial aid form if seeking a Graduate Assistantship; and
8. Other information, such as a personal interview, as requested by the department admissions committee.

It is the student's responsibility to ensure that his/her file is complete. Incomplete files will not be considered. Application materials for U.S. residents requesting financial support are due March 1.

In general, applicants are expected to have a 3.50 grade point average on all graduate-level work and an indication of potential to complete all requirements of doctoral study successfully to be admitted as doctoral students in special education.

After Admission Committee review, the Doctoral Program Coordinator may recommend to the department faculty that the applicant be: 1. admitted fully to the Ed.D. program in special education, 2. admitted provisionally to the appropriate doctoral program, or 3. denied admission to the doctoral program in special education. A recommendation for provisional admission may occur when an applicant has not met the criteria or prerequisites to do advanced graduate-level work. Provisional admission requires the satisfactory completion (e.g., with a minimum 3.50 grade point average) of nine or more hours in regularly scheduled graduate courses approved by the student's advisor and departmental faculty. After completion of the provisional program, the Doctoral Coordinator and Department Chair recommend to the Graduate College that the student either be transferred to regular status or dropped from the program.

Residency

Doctoral students are required to spend a minimum of two consecutive semesters (Fall-Spring, Spring-Summer or Summer-Fall) in full-time resident study in the Department of Special Education. Full-time resident study is defined as being enrolled in at least nine semester hours of graduate-level course work from an approved Program of Study (six semester hours if the student is a graduate assistant). In cases where residency includes a semester of course work prior to submission of the Program of Study, the advisor must approve residency. Work during residency is allowed. However, if the student is employed as a graduate assistant, any additional work beyond that performed as an assistant must conform to the rules of the university and Graduate College.

Program of Study

The program of study requires a minimum of 72 semester hours. Only credits that meet the following criteria may be included on the formal Program of Study:

1. Those not previously used to fulfill requirements for another degree;
2. Those taken while enrolled at an accredited graduate degree granting institution in a degree-granting program; or
3. Those taken as a nondegree student (not to exceed 15 total units); and
4. Those for which a grade of B or higher was earned.

In addition, two-thirds of the total semester hours included on the formal Program of Study (not including dissertation) must be taken at UNLV. Faculty of the Department of Special Education instructing Ed.S. and/or master's classes initiate an interaction with doctoral students enrolled in these courses regarding the appropriateness of both the content and performance requirements for doctoral students. Students not admitted to the doctoral program in Special Education (or to another doctoral program in Special Education) may enroll only one of the Core Curriculum courses (ESP 760) prior to formal admission.

The Department of Special Education generally tailors its leadership programs to meet the individual student needs and career goals in Special Education Administration and Higher Education. A content core of courses *is required of all doctoral students*. This content may not be waived. In addition to the core curriculum, students select concentrations in Leadership and Exceptionality Specialties as appropriate.

Core Curriculum for Ed.D. Degrees (23 semester hours)

Each doctoral student will complete the core curriculum below:

1. ESP 732 Grant Writing for Human Services (3 semester hours)
2. ESP 760 Professional Seminar in Special Education (3 semester hours)
3. ESP 782 Leadership Seminar in Special Education (3 semester hours)
4. ESP 783 Single Subject Methods in Special Education (3 semester hours)

5. ESP 784 Seminar in Advanced Special Education Technology (3 semester hours)
6. ESP 785 Issues, Trends and Futures in Special Education (3 semester hours)
7. ESP 796 Dissertation Prospectus (2 semester hours) to be taken as an independent study supervised by the advisor.

Doctoral students must earn a grade of B or higher in all core curriculum courses.

1. Ed.D. Research Course Work (6 semester hours)
2. EPY 721 Descriptive and Inferential Statistics (3 semester hours)
3. EPY 722 Inferential Statistics and Experimental Design (3 semester hours) or equivalent course work

Leadership Studies (18 semester hours)

Each doctoral student will complete 18 units in one or more of the following leadership concentrations: Parenting, Administration, Technology, Research, Consultation, Diagnosis/Assessment, Transition, Curriculum, Early Childhood Special Education, Higher Education, or Early Childhood Education.

Exceptionality Studies (18 semester hours)

Doctoral students complete nine semester hours each in two specialty areas from the list below:

Learning Disabilities, Emotional Disturbance, Mental Retardation, Gifted and Talented Education, Developmental Disabilities/Risks.

Writing Proficiency

Students are required to demonstrate doctoral level writing proficiency beginning with the first doctoral seminar, ESP 760.

Dissertation (12 semester hours)

Upon completion of course work, doctoral students enroll in 12 semester hours of dissertation credit (ESP 799: Dissertation).

*Hours may be reduced based on a student's previous academic preparation related to leadership studies and exceptionality specialties. However, under no circumstances will the Formal Program of Studies include fewer than 72 semester hours.

Colloquium

The Special Education Doctoral Colloquium typically is held one Friday each semester. The Doctoral Coordinator coordinates these meetings with the assistance of the special education faculty and doctoral students.

Doctoral Studies Committee

Each student is required to select a faculty committee designated as the doctoral studies committee. This committee consists of a committee chair (the student's advisor), who is to have been selected by the time 12 semester hours of course work have been completed, two other faculty from within the Department of Special Education, and a Graduate

College representative. This committee oversees the student's progress, including the comprehensive evaluation processes. A temporary advisor may be appointed until the student becomes familiar with faculty.

Comprehensive Examination

The comprehensive examination is taken by the student during the semester immediately preceding enrollment in ESP 799: Doctoral Dissertation. The comprehensive examination consists of 16 hours of written examinations with eight hours structured by the student's major advisor and eight hours structured by the other committee members. The examinations are scheduled on two successive Fridays, the first two Fridays in October or the first two Fridays in March. Students may petition the Doctoral Program Committee (not the individual Doctoral Studies Committee) for permission to take comprehensive examinations in the summer or an alternative set of consecutive Fridays.

The questions on the comprehensive examination address elements of the Core, Research, Leadership Studies, Exceptionality Specialties, and any course work taken for licensure or endorsements. The student's Doctoral Studies Committee provides general parameters from which questions are selected. "Take-home" examinations, in whole or in part, are not allowed. Students may use college-provided technology for word-processing. Grading consists of three categories: Pass, Fail, and Pass with Distinction. Pass with Distinction occurs contingent upon a unanimous vote of the committee excluding the Graduate College representative.

Dissertation Proposal and Advancement to Candidacy

Upon successful completion of comprehensive examinations, the student selects a dissertation committee (i.e., minimum of three faculty members from the Department of Special Education and an outside member appointed by the Graduate College) and submits a dissertation proposal to the committee. This proposal includes an introduction, review of the literature, and a discussion of study methods. Two weeks after this proposal is submitted to the dissertation committee, the committee meets with the student to accept or reject the proposal, as well as provide a critique of its relative strengths and weaknesses. Upon acceptance of the student's dissertation proposal, a recommendation for advancement to candidacy is submitted to the Graduate College.

Dissertation Proposal and Defense

Upon completion of the full dissertation, a defense is scheduled. Students need to obtain *The Guide to Preparing and Submitting a Thesis or Dissertation* from the Graduate College web site.

Early Childhood Education

ECE 706 3 credits **Planning Curriculum for Young Children**

Examination of basic principles underlying the development and planning of nonhandicapped early childhood education curriculum. Review of components of selected curricular areas.

ECE 707 3 credits **Programs in Early Childhood Education**

Overview of current models of early childhood education. Includes principles, research studies, and current trends as factors related to the education of young children.

ECE 709 3 credits **Investigations in Early Childhood Education**

Current practices and methods in early childhood education investigated and evaluated in depth. Prerequisite: Consent of instructor.

ECE 710 3 credits **Planning and Administering Early Childhood Programs**

Investigates the basic principles involved in establishing and operating centers for the young child; examines the historical background of the early childhood education movement; and reviews theories of child development as they relate to planning, operating, and evaluating centers. Prerequisite: Consent of instructor.

ECE 711 3 credits **Science and Math for Young Children**

Preparation, by modeling, for presenting and structuring appropriate science activities/experiences for young children (PK-2) with emphasis on integrating process skills with life, earth, and physical science concepts. Prerequisite: Nine hours of content science, or consent of instructor.

ECE 722 3 credits **Theoretical Bases for Early Childhood Education**

Examination of the underlying theories and perspectives supporting early childhood education. Emphasis on the theoretical foundations for early childhood education and the application of developmental theories across domains.

ECE 726 3 credits **Early Education for Infants and Toddlers**

Theoretical and practical approaches to early education services for newborns, infants, toddlers, and their families. Development of infants and toddlers within the developmental domains and focuses on attachment, milestones, identification of developmental delays, and program development and evaluation.

Special Education

ESP 700 1-6 credits **Problems in Special Education**

Specialized instruction in special education designed to develop depth in understanding a current educational problem of the in-service teacher. Maximum of six credits accepted toward degree from special education courses in EPY 700, ESP 700, and ICG 700.

ESP 701 3 credits **Introduction to Special Education and Legal Issues**

Survey of the characteristics, training, and educational needs of students with disabilities. Designed for graduate students in special education, general education, nursing, counseling, psychology and related fields. Required of all students in the Generalist Program who do not have a bachelor's degree in special education.

ESP 702 3 credits **Psychological and Social Problems in Mental Retardation**

Study and interpretation of theories and research on the learning characteristics of persons with mental retardation; psychological and social contributions to educative/habilitative solutions in mental retardation.

ESP 703 3 credits **Prescriptive and Precision Teaching W/MR**

Cognitive, adaptive, and diagnostic-prescriptive instructional strategies and behavioral interventions for persons with mental retardation and diverse educational and community settings.

ESP 704 3 credits **Adaptive Curricular Programming for Persons with Mental Retardation**

In-depth analysis and application of curricular development and implementation for persons with mental retardation in diverse educational settings.

ESP 705 3 credits **Psychological and Sociological Problems of Students with Emotional Disabilities**

Study and interpretation of theories and research concerning learning characteristics and psychological and social aspects of the student with emotional disabilities within the school setting.

ESP 706 3 credits **Advanced Educational Strategies for Students with Emotional Disabilities**

Evaluation of the behavioral characteristics of students with emotional disabilities applied to practical classroom strategies. Application of treatment strategies and relevant research to the educational problems of students with emotional disabilities. Prerequisites: ESP 705.

ESP 707 3 credits **Theories of Learning Disabilities**

Study of the contemporary positions regarding learning disabilities. Curricular implications of positions emphasized.

ESP 708 3 credits **Advanced Education Strategies for Students with Disabilities**

Advanced instructional methods and procedures applicable to the education of children with learning disabilities. Prerequisite: ESP 701 or 707.

ESP 709 3 credits **Diagnostic and Prescriptive Assessment for Diverse Learners**

Establishment of educationally relevant diagnostic and prescriptive teaching procedures for students who are learners (i.e., students with/or at-risk for disabilities, including those who are second language learners). Emphasis upon both individual and group prescriptive classroom methodologies. Prerequisites: ESP 701 or 708.

ESP 712 3 credits **Psycholinguistic Assessment Models**

Study of psycholinguistic models for the assessment of learning characteristics of people with disabilities. Emphasis on prescriptive educational programming.

ESP 713 3 credits **Affective Assessment Models**

Study of affective behavioral testing procedures applicable to children and adolescents in public school settings. Emphasis on classroom observational techniques, as well as supplemental employment of data obtained through school relevant behavior rating scales and checklists, task analysis assessments, projective and group personality testing and case studies. Prerequisite: Consent of instructor.

ESP 714 3 credits **Advanced Seminar in Learning Disabilities**

In-depth review of recent developments and research in the field of learning disabilities. Prerequisite: ESP 707.

ESP 715 3 credits **Communication Programming for Persons with Severe Disabilities**

Critical study of disorders affecting communication of persons with severe disabilities. Emphasis on developmental considerations, ecological needs, clinical assessment, selection and implementation of augmentative systems, support services, funding, and research. Prerequisite: Consent of instructor.

ESP 717 A-J 1-9 credits **Seminar in Advanced Curriculum Development**

Critical study of current curricular models in special education. Covers content in specific education-relevant areas. Areas of emphasis: a) mental retardation. b) emotional disturbance. c) learning disabilities. d) early childhood special education. e) adaptive physical education. f) gifted

education. g) parent education. h) career education. i) management and staff direction, and j) English language learners in special education. Maximum of nine credits may be applied to a graduate program. May be repeated to a maximum of nine credits. Prerequisite: ESP 701.

ESP 718 **3 credits**
Assessment of Persons with Severe Mental Retardation

Emphasis on diagnosis and problems encountered in assessing individuals with severe disabilities. Practice observation techniques, develop and implement ecological inventories, developmental scales, and adaptive behavior scales. Prerequisite: ESP 702 or consent of instructor.

ESP 719 **3 credits**
Advanced Oral and Written Language Instruction for Students with Disabilities

Overview course on language development, disabilities, and delays. Information and specific strategies for identifying oral and written language difficulties in students with disabilities. Emphasis on educational applications -- designing and implementing instruction for students with disabilities. Prerequisites: ESP 701 and ESP 764.

ESP 720 **1-9 credits**
Field Experience in Special Education

Supervised experience in designing and using prescriptive teaching programs. Areas of emphasis include: mental retardation, emotional disturbance, learning disabilities, early childhood special education, adaptive physical education, gifted education, parent education, career education. Maximum of nine credits may be applied to a graduate program. May be repeated to a maximum of nine credits.

ESP 722 **3 credits**
Multicultural Perspectives in Special Education

Introduces trends and issues in special education relative to students with disabilities who come from culturally diverse backgrounds. Educational programming and adaptations emphasized.

ESP 723 **3 credits**
Learning Strategies Instruction

Theoretical and practical aspects of implementing a learning strategy curriculum within elementary and secondary school environments. Class participants analyze, synthesize, and modify instructional strategies to meet the needs of students with disabilities. Prerequisite: ESP 701.

ESP 724 **3 credits**
Math Methods in Special Education

Effective classroom methods and strategies for assessing, teaching, and monitoring the mathematical performance of students with learning difficulties. Emphasis on practical classroom techniques designed to facilitate skill acquisition, maintenance, retention, and generalization. Computation and problem-solving covered. Prerequisites: ESP 701, MAT 122 and MAT 123 or equivalent, and consent of instructor.

ESP 725 **1-3 credits**
Workshops in Special Education

Supervised instruction through workshops and conferences in topics relevant to special education. Emphasis on in-service education for regular and special education personnel. May be repeated to a maximum of four credits. S/F grading only.

ESP 726 **3 credits**
Policy Analysis and Development for Special Human Services

Principles and practices of policy development and critical analysis of established social policy in local, state, and federal programs and its impact on persons with exceptionalities.

ESP 727 **3 credits**
Technology in Special Education

Uses of computers and other technologies in the instruction of students with disabilities. Includes strategies for adapting computers and selecting software for individuals with special needs. Principles for integrating technology into the curriculum and strategies for teaching academic subjects with technology stressed. Overviews of integrated technologies such as hypermedia and access technologies provided. Prerequisite: ICE 334 or ICG 754 or equivalent.

ESP 728 **3 credits**
Theory of Play Development

Critical analysis of theoretical, philosophical, empirical, and educational implications of play. Provides planning, integrating and evaluating play in the educational curriculum.

ESP 729 **3 credits**
Characteristics of Students with Autism Spectrum Disorders

Survey of the characteristics of students with autism spectrum disorders, including historical foundations, definitions, placement alternatives, and current issues. Prerequisites: ESP 701 and 733 or equivalent.

ESP 730 **3 credits**
Parent Involvement in Special and General Education

Overview of current involvement, rationales for parent involvement, and research that supports it. Focuses on common effort by the school, home and community to provide for students' growth through integrated successive learning experiences that allow for variation in skills, cognitive development, emotional creative abilities, and physical development.

ESP 731 **3 credits**
Practicum in Parental Involvement

Advanced practicum to involve teachers with parents of children with special needs in various aspects of special education programming in the home, school, and public agency settings. Development of parent education materials and program for parents, or prospective parents in some of the basic skills necessary for effective parenting. Prerequisite: ESP 730.

ESP 732 **Grant Writing for Human Services** **3 credits**

History and pragmatics of grant proposal writing, management, and evaluation for federal, state and philanthropic support of research, demonstration programs, and personnel preparation in special education and related services. Prerequisite: ESP 760.

ESP 733 **Management and Modification of Students with Special Needs** **3 credits**

Provides introduction to applied behavior analysis as it relates to teaching and managing students with special needs. Focuses on teaching new skills and managing inappropriate behavior, both academic and social. Strengths and weaknesses of common school practices for controlling students' inappropriate behaviors described.

ESP 734 **Vocational and Career Education for Persons with Disabilities in Transition** **3 credits**

Consideration and design of vocational and career education programs for students with disabilities including those with mental retardation, learning disabilities, emotional disturbances, and others.

ESP 735 **Psychoeducational Methods and Strategies for Students with Emotional Disabilities** **3 credits**

Application of behavioral, psychoeducational and other management approaches for students with disabilities. Special emphasis given to implementation of behavior management techniques for students with disabilities and students in early childhood special education. Prerequisite: Consent of instructor.

ESP 736 **Advanced Practicum with Students with Emotional Disabilities** **3 credits**

Focuses on students with emotional disabilities, with special emphasis upon student application of sophisticated educational methods and curricular models in both classroom and clinical contexts. Specific assignments pertaining to observed behavior and its modification through differing treatment approaches. Prerequisite: Consent of instructor.

ESP 737 **Advanced Practicum with Exceptional Children** **1-9 credits**

Teaching and research experience with exceptional students, with special emphasis upon application, educational methods, and curricular models. Areas of emphasis: a) mental retardation, b) emotional disturbance, c) learning disabilities, d) early childhood special education, e) research, f) gifted education, g) parent education, h) career education. Maximum of nine credits may be applied to a graduate program. May be repeated to a maximum of nine credits.

ESP 738 **Advanced Strategies in Transition Planning for Youth with Disabilities** **3 credits**

Strategies used to develop and implement plans to support the movement of youth with disabilities from school to adult life. Particular focus on supporting student self-determination, collaborative interagency, systems change, and natural supports. Prerequisites: ESP 734 or its equivalent.

ESP 739 **Advanced Educational Strategies for Students with Autism Spectrum Disorders** **3 credits**

Advanced instructional methods and curricular models applicable to the education of students with autism spectrum disorders. Prerequisite: ESP 729 or equivalent.

ESP 740 **Speech and Hearing Therapy for Classroom Teachers** **3 credits**

Overview of common speech and hearing disabilities, with primary teacher-relevant therapeutic methods and materials applicable to general and special classroom contexts.

ESP 741 **Introduction to Gifted Education** **3 credits**

Introduction to individuals who are gifted, including definition, identification, characteristics, etiology, and nurturing factors. Relationship of creativity and concerns for underachievement, cultural differences, disabilities and gender issues of individuals who are gifted.

ESP 742 **Dimensions of Giftedness** **3 credits**

Information concerning educational procedures in all areas of functioning appropriate for gifted individuals, along with basic strategies for creativity and self-concept. Skills developed for planning, implementing, and evaluating effective programs for the gifted. Individualization, strategies for teaching, simulation and inquiry skills, and skills of higher-level thinking emphasized. Prerequisite: ESP 741 or equivalent.

ESP 743 **Teaching Models in Gifted Education** **3 credits**

Provides comprehensive review of teaching-learning models for use in development and implementation of curriculum for gifted students. Prerequisite: ESP 742 or consent of instructor.

ESP 745 **Experiential Learning in Gifted Education** **3 credits**

Connection between the gifted classroom and the world of work and postsecondary education. Focuses on breaking boundaries of school with emphasis on global issues, rapidly changing workplace, and linkage between schools and future life experiences. Prerequisite: ESP 741.

ESP 746 **3 credits**
Transpersonal Education of the Gifted

Intensive study of new approaches dealing with creative expression for the gifted student stressing strategies for creativity.

ESP 747 **3 credits**
Contemporary Considerations Gifted Education

Current trends, research and issues in the education of students who are gifted. Prerequisites: ESP 746 and consent of instructor.

ESP 748 **3 credits**
Overview of Assistive Technology

Overview of assistive technology as it relates to life skills including communication, mobility, education, recreation, vocation, independence and therapy/rehabilitation. Variety of computer access methods investigated. Underlying assumptions and legal basis explored. Prerequisites: ESP 701 or equivalent.

ESP 749 **3-6 credits**
Thesis

May be repeated, but only six credits applied to the student's program. S/F grading only.

ESP 750 **3 credits**
Philosophical Perspectives in Special Education

Emphasis on the sociocultural, epistemological, teleological, and ethical implications of special education programs. Prerequisite: ESP 760.

ESP 751 **3 credits**
Case Study Approaches in Special Education

Analyses and applications of representative theoretical interpretations of exceptionality to case history material.

ESP 752 **3 credits**
Consultative Techniques in Special Education

In-depth emphasis on the differing roles of the special education consultant. Attention given to acquiring practical skills in interviewing parents and teachers of exceptional children.

ESP 753 **3 credits**
Administration and Supervision of Special Education Programs

Investigation of existing special education administrative units, pupil placement procedures, student staffing, program reimbursement procedures, and federal funding models. Prerequisite: Consent of area coordinator.

ESP 754 **4 credits**
Legal and Political Issues in Special Education Programming

Analysis of federal, state, and local statutes, policies and titles which affect the funding and direction of programs for exceptional children. Impact of special education from social, political, and economic perspectives.

ESP 755 **3 credits**
Central Nervous System and other Medically Related Aspects of Handicapping Conditions

Overview of central nervous system and medical bases of normal development, learning, disabilities, and threats to development. Emphasis on basic knowledge and skills that allow teachers, school psychologists, and other educational personnel to more adequately assess and instruct students with disabilities in educational environments.

ESP 757 **3 credits**
Assistive Technology Assessment

Presents variety of procedures for gathering data to identify assistive technology needs. Role of team decision making in the assessment process to determine appropriate assistive technology solutions described. Integration of assistive and educational technologies also investigated. Prerequisites: ESP 748, ESP 701.

ESP 758 **3 credits**
Collaborative Services in Assistive Technology

Emphasizes development of collaborative relationships that support development of student-centered assistive technology plans, including working with parents, students and related service providers. Funding issues also addressed. Prerequisites: ESP 701 and overview of AT (ESP 748).

ESP 759 **3 credits**
Assistive Technology Applications for Students with Disabilities

Development of functional applications of assistive technology in the areas of communication, mobility, education, recreation, vocation, independence, and therapy/rehabilitation. Prerequisites: ESP 701, ESP 715 and ESP 727.

ESP 760 **3 credits**
Professional Seminar in Special Education

Perceptions of exceptionality by a variety of interdisciplinary personnel. Prerequisite: Doctoral status or consent of instructor.

ESP 762 **3 credits**
Evaluation of Programs for Persons with Exceptionalities/ Special Needs

Principles and practices in program evaluation including a critical analysis of models, methods of inquiry, evaluator competencies issues, implementation strategies, and setting criteria and expectations of impact on persons with exceptionalities/special needs.

ESP 763 **1 credit**
Seminars in Selected Special Educational Topics

Areas of emphasis are a) mental retardation, b) emotional disturbance, c) learning disabilities, d) autism, e) early childhood, f) gifted education, g) parent education, h) higher education, i) special education administration, j) research, k) consultation, l) curriculum, m) technology, n) ABA, o) diversity, p) professional writing. Prerequisites: ESP 760 and consent of instructor.

ESP 764 **3 credits**
Characteristics & Inclusive Strategies for Students with Emotional Disturbance, Learning Disabilities & Mild Mental Retardation
Overview of natural and characteristics of students with mild disabilities. Issues in assessment, curriculum and instruction, and placement discussed.

ESP 765 **1 credit**
Seminars in Selected Assessment Topics
Individual and small group coverage of specific topics germane to the management of diagnostic-prescriptive programs. Various topics may be taken and repeated for one credit to a total of nine credits. a) Program coordination and management, b) Diagnostic-prescriptive interpretative analyses, c) Special diagnostic-prescriptive applications to intellectual functioning, d) Special diagnostic-prescriptive applications to adjustive functioning, e) Special diagnostic-prescriptive applications to adaptive functioning, f) Program communication in agency and community contexts, g) Special diagnostic facilities planning. Prerequisite: Consent of instructor.

ESP 766 **1 credit**
Comprehensive Examination
Preparation for Comprehensive Examination. Students enroll in this course only if they are not enrolled in coursework in the semester in which they sit for the Comprehensive Examination. No additional assignments are required. Only one credit will be accepted toward degree plan. S/F grading.

ESP 767 **3 credits**
Training Program Seminar
In-depth analysis of special education training program roles and functions in college and university settings. Emphasis upon teaching, supervisory, and advisement functions, program and area curriculum development, program funding, program-university, public agency and community relationships, and ancillary training program responsibilities. Prerequisite: Consent of instructor.

ESP 770 **3 credits**
Second Language Methods for Diverse Learners in Inclusive Settings
Study and implementation of methods and strategies for teaching English language learners (ELLs) with and without disabilities. Learner characteristics and second language development reviewed followed by practical techniques for teaching diverse second language learners across the curriculum.

ESP 771 **3 credits**
Perspectives on Early Childhood Special Education
Perspectives of national, state, and local programs in special education for young children with disabilities. Reviews variables related to: program development, classroom management, parent involvement, legislation and funding, disability condition, identification, screening and assessment, learning and developmental problems, research, normal child development and developmental deviations.

ESP 772 **3 credits**
Family Education in Early Childhood Special Education
Review of average family structure and interaction patterns, roles, expectations and conflicts; mother-infant, infant-family bonding patterns; general specific problems and needs of families of young children with disabilities; programs developed for family involvement and education; national, state and local program models and evaluation. Prerequisite: ESP 771 or consent of instructor.

ESP 773 **3 credits**
Assessment for Young Children with Disabilities
Focuses on subjective, objective, unstructured, and structured observations of young children with physical disabilities and disabilities of behavior, communication, learning, and development. Survey, review and critique of standardized and non-standardized tests as well as the use of test data in planning instruction. Prerequisite: ESP 771 or consent of instructor.

ESP 774 **3 credits**
Seminar in Curriculum Development in Early Childhood Special Education
Focuses on the identification of important components of early childhood education for young children with disabilities; critical evaluation for the suitability of various curriculum modes for various disabilities; critical evaluation of commercial materials; designing new curriculum models; and utilizing teacher-made materials. Prerequisite: ESP 771.

ESP 775 **3 credits**
Strategies for Early Childhood Special Education
Focuses upon development of behavioral objectives, task analysis, and grouping and regrouping of children. Includes behavior modification, precision teaching, interaction analysis and microteaching procedures. Consideration of modifications of classroom physical and learning environments, reinforcement patterns, and questioning styles, etc. Prerequisite: ESP 771 or consent of instructor.

ESP 776 **3 credits**
Seminar in Advanced Strategies for Early Childhood Special Education
Focuses on a critical review of research, problems, and issues pertaining to the effectiveness of various interventions and teaching strategies with young children with disabilities. Prerequisites: ESP 775 and consent of instructor.

ESP 777 **3 credits**
Assistive Technology Strategies for Young Children
Emphasizes the selection and implementation of assistive technology for young children with and without disabilities. Prerequisites: ESP 701 and ESP 748.

ESP 778 **3 credits**
Affective Development of Young Children with Disabilities
Definition and components of affective development; verbal and nonverbal expressions and recognition of affect; primary

and learned affects, interdependence of social and affective development; issues and problems related to assessment and intervention; suggestions for parents, teachers, and others to facilitate appropriate affective development and remediation of problems. Prerequisite: ESP 771 or consent of instructor.

ESP 779 **3 credits**

Early Intervention Service Coordination

Provides content related to staffing patterns in programs for young children with disabilities; organization and implementation of training to meet identified needs of varied paraprofessionals and professionals; supervisory and consultive roles; and budget and fiscal matters. Prerequisite: ESP 771 or consent of instructor.

ESP 780 **3 or 6 credits**

Field Experience in Early Childhood

Special Education — Infancy

Intensive 15-week full- or part-time early intervention experience with high risk children and infants with disabilities and their families. Experience includes working with children below age three years in individual and small group activities, planning and implementing Individual Family Service Plans, and exploring community resources. Prerequisite: Consent of instructor.

ESP 781 **3 or 6 credits**

Field Experience in Early Childhood

Special Education — Preschool/Kindergarten

Intensive 15-week full- or part-time supervised teaching experience with young children with disabilities and their families. Experience includes working with children three to six years of age in individual, small and large group activities, planning and implementing Individualized Program Plans, and exploring community resources. Prerequisite: Consent of instructor.

ESP 782 **3 credits**

Leadership Seminar in Special Education

Teaches and empowers participants to become highly effective leaders in the field of special education. Current leadership paradigms and their application to a variety of professional roles in special education explored. Prerequisite: ESP 760.

ESP 783 **3 credits**

Single Subject Methods in Special Education

Overview of methods for evaluating the effectiveness of individual educational interventions and curricula for students with disabilities. Factors which determine when and under what conditions it is appropriate to employ different assessment strategies. Prerequisites: ESP 760.

ESP 784 **3 credits**

Seminar in Advanced Special Education Technology

In-depth analysis concerning the impact of technology on persons with disabilities. Includes analysis and synthesis of

research, local, state, and national policies and initiatives; resource allocations; funding issues; and the use of technology in higher education special education. Prerequisites: ESP 760.

ESP 785 **3 credits**

Issues, Trends and Futures in Special Education

Concepts and techniques which facilitates students' abilities in issue analysis, issue resolution, trend impact analysis, and futures formulations. The latter includes evaluations of possibilities, probabilities, and preferences in creating the future. Prerequisite: ESP 760.

ESP 791 **3 credits**

Proposal Design and Analysis

Formative and summative research considerations and applications, with emphasis upon practitioner-relevant proposal development, research design, and interpretive critical analyses. Prerequisite: Consent of instructor.

ESP 792 **1 credit**

School Psychology Seminar

Review of issues and research in the field of school psychology. May be repeated to a maximum of four credits. Prerequisite: Consent of instructor.

ESP 793 **3-6 credits**

Advanced Field Experience in Special Education

Field-relevant applications of administrative diagnostic-prescriptive and research content to practical working situations. Prerequisite: Consent of instructor.

ESP 794 **3-6 credits**

Internship in Special Education

Work experience in one specific area of special education: teaching, curriculum consulting, or administration. Prerequisite: Consent of area coordinator.

ESP 796 **2 credits**

Dissertation Prospectus

Development of appropriate field-relevant topics as a preface to dissertation writing. Prerequisites: ESP 760.

ESP 798 **2 credits**

Professional Paper in Special Education

ESP 799 **3-12 credits**

Dissertation

Practitioner-relevant thesis covering significant special educational topics, with appropriate applications of demonstration, research and/or model formation. Prerequisite: ESP 796. 3-12 credits in increments of three.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

Sports Education Leadership

Chair

Lounsbery, Monica A.F. (2001), Associate Professor; B.S., Dakota Wesleyan University; M.Ed., Ph.D., University of Nebraska, Lincoln.

Graduate Coordinator

Landwer, Gerald E. (1988), Professor; B.S., M.P.E., Ed.D., University of Nebraska.

Graduate Faculty

Apache, R.R. Goyakla (2002), Associate Professor; B.S., University of Texas, El Paso; M.S., Texas Tech University; Ph.D. Indiana University.

Bungum, Tim J. (2001), Associate Professor; B.A., Luther College, M.S., DrPH, University of South Carolina.

Sharpe, Tom (2000), Professor; B.A., Vanderbilt University; M.S., Ed.D., West Virginia University.

Schraw, Gregory (2000), Professor; B.A., University of Illinois-Urbana; M.S., Ph.D., University of Utah.

Stahura, Kurt (2004), Assistant Professor; B.A., University of Wisconsin; M.A., Ph.D., University of Minnesota.

Wolverton, Mimi (2001), Associate Professor; B.S., Northern Illinois University; MBA, Ph.D., Arizona State University.

Professors Emeriti

Rothermel, Bradley L. (1981-2000), Emeritus Associate Professor; B.S., Northern Illinois University; M.S., Ph.D., University of Illinois, Champaign-Urbana.

Starr, John T. (1965-2000), Emeritus Associate Professor; B.S., M.Ed., University of Wyoming; Ed.D., University of Southern California.

The Department of Sports Education Leadership offers M.Ed, M.S., and Ph.D. graduate degree options. All graduate programs are designed to provide quality preparation for current and future sport leaders in the areas of physical education teacher education, adapted physical education, coach education, and athletic administration. Research and creative scholarly activity are viewed as essential experiences in all Sports Education Leadership graduate programming.

Master Degree Programs

The Department of Sports Education Leadership offers the Master of Education (M.Ed.) and the Master of Science (M.S.) degrees. Both degrees require a minimum of 36 semester hours. The M.S. degree is intended for students who wish to increase their knowledge and skills in teaching and coaching effectiveness and for related administrative activities. This degree is designed for those who wish to contribute to the teaching and coaching professional research literature. The M.S. degree is also viewed as a potential foundation for doctoral work and includes an appropriate research methods core and culminating thesis. The M.Ed. is designed for inservice teachers and administrators who are

interested in furthering their careers in physical education. Graduates of M.Ed. degree programs have assumed positions as master teachers, department chairs, athletic directors, or curriculum coordinators. The philosophy underlying this degree option is that graduate education can be both academic and practical. Specialized skills are developed in program design, program assessment, analysis of teaching, and instructional strategies.

Concentrations in physical education teacher education, adapted physical education and athletic administration are offered for both the M.Ed. and the M.S. degree options.

Admission Requirements for Master's Programs

Admission to graduate studies at UNLV requires a bachelor's degree from an accredited four-year college or university with either a minimum grade point average of 2.75 overall or a 3.00 in the last two years of undergraduate work. Master's degree programs require that an application for admission be submitted to the Graduate College, as well as transcripts from all colleges and universities attended.

Admission to the Master of Science Degree program in physical education and the Master of Education in physical education is based on the following criteria;

1. GRE/MAT scores
2. Two letters of recommendation
3. Transcripts from all colleges and universities attended

Application Deadline

Applications for all programs will be considered three times per year. The deadlines for receipt of applications are October 1, February 1, and May 1. Application packets may be obtained from the department office, College of Education, Carlson Education Building, room 399G. Applicants may be admitted under provisional status if they are deficient in no more than two of the admission requirements. If the applicant is admitted under provisional status, satisfactory completion of specified course work will be required in order to obtain full admission status.

Student Advisory Committee

Students are required to select a graduate advisory committee by the beginning of the third semester of enrollment. Advisory committees must consist of three Sports Education leadership graduate faculty members (one of which can be an associate graduate faculty member) and a Graduate College representative from outside of the department. The advisory committee should be formed prior to the student's completion of 16 credit hours. The committee oversees the student's progress, including the comprehensive exams. A temporary advisor may be assigned until the student becomes acquainted with the faculty.

Ph.D. in Sports Education Leadership

The Ph.D. program is designed specifically for professionals who desire tenure-track research, teaching, and administrative positions in postsecondary education. The Ph.D. program offers academic concentrations in physical education teacher education, coach education, adapted physical education, and athletic administration.

Admission Requirements

Admission to doctoral study in the Department of Sports Education Leadership will be granted to qualified applicants based on a combination of the following:

1. A master's degree from an accredited college or university
2. Official copies of all postsecondary transcripts
3. Professional vita or resume
4. Evidence of writing ability with appropriate examples including excerpt from a master's thesis, professional paper, or published article
5. Three letters of recommendation from previous instructors and/or professional colleagues attesting to the applicant's ability to complete doctoral study
6. A detailed statement explaining why the student desires admission to the program
7. One personal interview with the graduate faculty committee within the program
8. Satisfactory GRE test scores (taken within five years from the date of application for admission)
9. TOEFL scores are required of international students with a preferred minimum of 550

Degree Requirements

The Ph.D. in Sports Education Leadership will consist of a minimum of 66 credit hours beyond the master's degree to include the following areas: content knowledge (27); related discipline electives (15); research methodology (12); and dissertation (12). Individual programs of study may exceed minimum requirements and specific course work will vary depending on particular interest. Students must maintain a GPA of 3.00 or higher for all course work taken at the doctoral level.

Scholarly Product Requirement

Each student must satisfy a scholarly product requirement. This requirement can be met in one of two ways:

1. Students may submit a research study to a refereed journal for publication.
2. Students may submit a proposal for presentation of research at an annual conference of a national organization.

Student Advisory Committees

Students are required to select a graduate advisory committee before completing 16 hours or by the sixth week for the first semester of admission if 12+ hours, taken prior to admission, will be considered as part of the degree program. Advisory committees must consist of three Sports Education Leadership graduate faculty members (one of which can be an associate graduate faculty member) and a graduate college representative from outside of the department. The chair of the advisory committee must be a graduate faculty member in the Department of Sports Education leadership. Advisory committees should be informed prior to the student's completion of 16 credit hours.

The committee oversees the student's progress, including the comprehensive exams. A temporary advisor may be assigned until the student becomes acquainted with the faculty.

Comprehensive Examination

The student takes the comprehensive examination during the semester immediately preceding enrollment in dissertation. The comprehensive examination consists of six questions in which the student is allotted two hours per question. Questions are constructed and scored by the student's advisory committee. Students must file intent to take comprehensive examinations, adhering to timelines cited for other graduate programs scheduled by the Graduate College and the Department of Sports Education Leadership. The examinations are scheduled on two successive Fridays, the first two Fridays in October or the first two Fridays in March. Students may petition the Sports Education Leadership Graduate Program Committee for permission to take comprehensive examinations in the summer or in an alternative set of consecutive Fridays.

The questions on the comprehensive examination address elements of content knowledge, research methodology, and related discipline electives. The student's advisory committee provides general parameters from which questions are selected. "Take-home" examinations, in whole or in part, are not allowed. Students may use college-provided technology for word-processing. Grading consists of two categories: Pass and Fail.

Upon receiving a passing grade for the written comprehensive examination, students will be required to pass an oral examination by their respective advisory committees. Students must successfully complete the written and oral comprehensive examinations before beginning the dissertation.

Dissertation Proposal and Defense

Following the successful completion of the written and oral comprehensive examinations, the student must submit a dissertation proposal to the Doctoral Advisory Committee and submit the accompanying "Dissertation Prospectus Approval" form from the Graduate College. The Doctoral Advisory Committee will determine the acceptability of the prospectus.

Upon completion of the dissertation, a defense will be scheduled and conducted in accordance with the Graduate College's policy for dissertation completion. Students should obtain *The Graduate Study Guide* and the *Guide to Preparing and Submitting a Thesis or Dissertation* from the Graduate College web site.

It is the student's responsibility to file all required paperwork (Dissertation Prospectus Approval, Appointment of Advisory Committee, proposed Degree program, etc.) to the Graduate College in a timely manner.

Physical Education

PED 703 **1 credit**
Readings in Health, Physical Education, and Recreation

Designed to acquaint advanced students with recent professional literature in health, physical education, and recreation. Weekly conference periods conducted.

PED 705 **3 credits**
Philosophy of Physical Education

Study of philosophical thought influencing physical education programs in the United States.

PED 710 **3 credits**
Curriculum in Physical Education

Study of the physical education curriculum and the process of developing a physical education guide.

PED 714 **3 credits**
Analysis of Teaching Physical Education

Explores a spectrum of research-based analytical tools for the systematic description, analysis and interpretation of the teaching process. Various theories of teaching and the instructional styles that complement them.

PED 715 **3 credits**
Supervision of Physical Education

Concepts, principles, and techniques of supervision for use by superintendents, supervisors, and teachers in the supervision of physical education programs.

PED 720 **3 credits**
Issues and Trends in Physical Education

Identifying, analyzing, and evaluating recent developments in physical education with special emphasis on the problems of the student in an area of specialization.

PED 721 **3 credits**
Facility Planning, Construction, and Utilization

Designed to acquaint students with the latest planning and construction concepts of indoor and outdoor physical education facilities, their upkeep and utilization.

PED 726 **3 credits**
Adapted Physical Education for the Developmentally Disabled

Study of the etiology and motor capacities of individuals with developmental disabilities. Includes relevant strategies for planning and implementing adapted physical education programs for individuals with learning disabilities, mental impairment, behavior disorders, and other health impairments.

PED 727 **3 credits**
Adapted Physical Education for Individuals with Chronic and Permanent Disabilities

Study of the prevalent, chronic, congenital, and permanent disabilities which effect motor performance. Considers the characteristics, limitations, and special needs required in selecting and implementing an adapted physical education program. Prerequisite: PED 465 or consent of instructor.

PED 728 **3 credits**
Evaluation Techniques in Adapted Physical Education

Study of evaluation instruments used in the assessment of individuals with disabilities, the interpretation of results, and application of pertinent data to motor programming. Prerequisite: PED 494, graduate standing, or consent of instructor.

PED 730 **3 credits**
Perceptual Motor Learning Theories and the Individual with Disability

Study of human movement and subsequent motor performance. Considers the delays in motor development, theories of perceptual motor learning and needs of individuals with disabilities in physical education settings. Prerequisite: consent of instructor.

PED 732 **3 credits**
Interscholastic and Intercollegiate Athletic Programs

(*Same as EDA 738.*) Designed to study all aspects of interscholastic and intercollegiate athletic programs. Topics include growth and development of athletic programs, governing bodies, athletics in education, philosophical reform, recurrent problems, athletes and the student movement, Title IX, sport, politics and education, and NCAA compliance.

PED 746 **3 credits**
Professional Internship in Athletics

(*Same as EDA 742.*) Supervised field experience in athletic management. Actual experience working in athletic programs and participating in functions associated with same. Prerequisites: Admittance to program in physical education and approval of advisor.

PED 748 **1-6 credits**
Professional Paper

May be repeated but only two credits will be applied to a student's program. S/F grading only.

PED 749 **3-6 credits**
Thesis
May be repeated but only six credits will be applied to the student's program. S/F grading only.

PED 750 **3 credits**
Biophysical Foundations of Physical Education and Sport
Integrative perspective of the biophysical foundations of physical education and sport. Emphasis on multidimensional changes that occur as an adaptation to training and other life-style factors.

PED 765 **3 credits**
Survey and Analysis of Professional Literature in Physical Education
Students review the current research and scholarly literature pertaining to physical education pedagogy. Articles, papers and research studies with special implications for teaching and curriculum are read, discussed and critically analyzed.

PED 790 **1-3 credits**
Independent Study in Athletic Administration
Independent study of a selected topic in athletic administration. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in PED 790-795 may be counted towards a master's degree. Prerequisites: consent of instructor.

PED 794 **1-3 credits**
Independent Study in Pedagogy
Independent study of a selected topic in pedagogy. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in PED 790-795 may be counted towards a master's degree. Prerequisites: Consent of instructor.

Howard R. Hughes College of Engineering

Welcome to the Howard R. Hughes College of Engineering. We believe you will find UNLV and the College of Engineering a great place to pursue your studies. With more than 60 faculty, 400 graduate students, and 1,400 undergraduates, we have a dynamic community of scholars. Beyond that, we've made innovations that have resulted in an imaginative, student-centered educational and research environment. We are growing, and our future looks very promising. UNLV is now a Research Intensive University, a distinction that the College of Engineering has played a major role in helping the university achieve.

Graduate students in the College of Engineering study a variety of disciplines, including computer science, construction management, civil and environmental, electrical and computer, and mechanical engineering. New programs are underway, and we are building first-class research facilities.

Graduate students are involved in all of the new and ongoing research being conducted by the faculty. Some of our research areas include transmutation of radioactive waste, air and water quality, data mining, materials research for the DOE stockpile stewardship program, vehicle and mass transit transportation, renewable energy (wind and solar), threat and terrorist defense, aerospace, and parallel processing and computer code development. One study we are currently conducting is with a "team" of five robots that play soccer and communicate with one another. This interdependent "soccer team" of robots is hoped to fuel the excitement of scientific and engineering discovery and to ultimately develop into research outcomes that serve mankind in a variety of ways. Some of these ways include automating many tasks in nonmanufacturing industries such as agriculture, construction, health care, entertainment, and education.

As the boundaries of science continue to expand, the College of Engineering is committed to offering students a variety of competitive programs. New master's programs in aerospace engineering, bioengineering, and materials and nuclear engineering are currently being considered by the university administration. Entertainment engineering, a joint program with the College of Fine Arts, is also underway. The joint venture is anticipated to eventually become the premier program for entertainment technology in the country.

The College of Engineering is an exciting place to pursue your graduate studies. We hope that you will join us at UNLV.

Eric Sandgren, Dean

Civil and Environmental Engineering

Chair

Ghafoori, Nader (2003), B.S.C.E., Texas Tech University; M.S.C.E., Ph.D., University of Miami.

Graduate Coordinator

Karakouzian, Moses (1988), Professor; B.C.E., American University of Beirut; M.S., M.B.A., Ph.D., Ohio State University; P.E., Ohio.

Graduate Faculty

- Batista, Jacimaria Ramos (1997), Associate Professor; B.S., Federal University of Ouro Preto; M.S., Montana College of Mineral Science and Technology; Ph.D., Pennsylvania State University.
- Cardle, James A. (1985), Associate Professor; A.S.C.E., B.S.C.E., Ph.D., University of Minnesota.
- Frederick, Gerald R. (1993), Professor; B.S., University of Toledo; M.S., Ph.D., Purdue University.
- James, David E. (1990), Associate Professor; A.B., University of California, Davis; M.S., Ph.D., California Institute of Technology.
- Kaseko, Mohamed S. (1993), Associate Professor; B.S., University of Dar-es-Salaam; M.S., Cornell University; Ph.D., University of California, Irvine.
- Kreamer, David K. (1990), Professor; B.S., M.S., Ph.D., University of Arizona.
- Ladkany, Samaan (1984), Professor; B.S., American University of Beirut; B.S., M.S., Ph.D., University of Wisconsin, Madison.
- Luke, Barbara (1995), Associate Professor; A.A., University of Florida; B.S., Ph.D., University of Texas at Austin; M.S., University of California, Berkeley.
- Nambisan, Shashi K. (1989), Professor; B.Tech., Indian Institute of Technology; M.S., Virginia Polytechnic Institute and State University; Ph.D., University of California, Berkeley.
- Neumann, Edward S. (1991), Professor; B.S.C.E., Michigan Technological University; M.S., Ph.D., Northwestern University.
- Opfer, Neil (1989), Associate Professor; B.S., B.A., Washington State University; M.S., Purdue University; P.D., University of Wisconsin.
- Piechota, Thomas (1999), Associate Professor; B.S., Northern Arizona University; M.S., Ph.D., University of California, Los Angeles.
- Sack, Ronald (2000), Professor; B.S., M.S.C.E., Ph.D., University of Minnesota.
- Shields, David (2003), Associate Professor; B.S., M.S., Texas A&M University; Ph.D., University of Texas, Austin.
- Teng, Hualiang (2004), Assistant Professor; B.S., M.S., Northern Jiaotong University; M.S.C.E., West Virginia University; Ph.D., Purdue University.

Professor Emeriti

- Wyman, Richard V. (1969-1992), Emeritus Professor; B.S., Case Western Reserve University; M.S., University of Michigan; Ph.D., University of Arizona.

Well-equipped facilities developed by the department faculty include a Computer Assisted Design Laboratory, an Engineering Geophysics Laboratory and Test Site, an Environmental Engineering Laboratory, A Soil and Rock Mechanics Laboratory, the UNLV Transportation Research Center, and a Water Resources Laboratory. These facilities provide state-of-the-art research tools. Among these are a MTS dynamic testing machine, a triaxial testing apparatus, a 50-foot tilting flume, concrete curing facilities and test frames, a portable wind tunnel, and a computer operated model shake table. PCs, workstations, and current software programs are available within these facilities, with additional facilities being available in the college. Additional assets include access to high speed multiprocessor computers housed in the National Supercomputing Center for Energy and the Environment. All facilities are located in the Thomas Beam Engineering Complex. Additional research facilities nearby include one of twelve national EPA laboratories (located on campus) and the Department of Energy's Nevada Test Site, which has been designated an Environmental Research Park.

Students with backgrounds in civil engineering and construction management, as well as related disciplines are invited to apply. Students with science backgrounds desiring admission to the graduate program will be required to complete course work, prerequisite or otherwise, that will assure successful completion of the graduate program. Specific course work requirements will depend on the area of specialization desired by the applicant.

Applicants must identify a specialization from one of the following areas: construction, environmental, fluids/hydraulics, geotechnical, structural, systems, or transportation. Applications for admission to the program are evaluated by faculty representing each of the respective areas of specialization. Applications from international students must reach the Graduate College by the dates specified in the catalog in order to be considered for financial aid. Offers of financial aid are made in writing by the department, which assumes no responsibility to provide financial support unless an offer is made in writing. Also, when the department has made an offer to provide financial support, it has no obligation to honor the offer unless the student attends UNLV and enrolls in the Civil and Environmental Engineering graduate program during the initial semester for which financial aid was offered.

Applicants should notice that some documents must be mailed to the Graduate College while others must be mailed to the Department of Civil and Environmental Engineering, as outlined below. ***It is imperative that the documentation is sent to the appropriate location to aid fast processing of the application.***

Documents to be mailed to the Department of Civil and Environmental Engineering:

Address: University of Nevada Las Vegas; Civil and Environmental Engineering; 4505 Maryland Parkway; Box 454015; Las Vegas, NV 89154-4015.

1. One official transcript from each post-secondary institution attended. Only transcripts sent directly from the institution are considered.

2. Letters of recommendation (two for M.S. and three for Ph.D. applicants).
3. One-page statement indicating the reasons why you wish to earn a M.S. or Ph.D. degree.
4. GRE General test scores taken in the last five years.

Documents to be mailed to the Graduate College:

Address: University of Nevada Las Vegas; Graduate College; 4505 Maryland Parkway; Box 451017; Las Vegas, NV 89154-1017.

1. A complete application form and a non-refundable fee (\$60 for U.S. and \$75 for International applicants).
2. One official transcript of each post-secondary institution attended. International students must submit official translated copies of transcripts. Only transcripts sent directly from the institution to the UNLV Graduate College are considered.
3. Official TOEFL or Michigan Test Scores (only if English is not native language) taken in the last two years.
4. Confidential Financial Certificate (for international students only)
5. High School Leaving Certificate (for international students only)

The deadlines for application to the Civil and Environmental Engineering Department are different from those established by the Graduate College, they are (starting spring 2004):

Spring Semester August 30 for international students
and November 15 for domestic students

Fall Semester March 15 for international students and
June 15 for domestic students

Master of Science in Engineering

Admission Requirements - M.S.E. Degree Program

In addition to the general requirements for admission to the Graduate College, an applicant for the M.S.E. program must have a bachelor's degree in engineering or a closely related discipline. Applicants desiring to specialize in environmental engineering who have baccalaureate degrees in the natural sciences may require at least an additional semester of full-time study to complete engineering prerequisite undergraduate course work; this may include fluid mechanics, calculus through differential equations, engineering physics, chemistry and engineering economics. Successful environmental engineering applicants are expected to complete a set of graduate courses in engineering hydrology, hydraulics, statistics, water and wastewater treatment, and wastewater treatment plant design during their graduate study. All applicants must submit a one-page Statement of Objectives indicating the area of civil engineering in which they wish to pursue graduate work and the reason they wish to earn a master's degree. All applicants are required to take the verbal, quantitative, and analytical writing portions of the GRE General Test and submit the scores to the Civil and Environmental Engineering department. Successful applicants generally have a combined verbal and quantitative GRE score of at least 1000 and GRE analytical writing score of at least 3.

Applicants from countries where English is not the native language must take the Test of English as a Foreign Language, earn scores of at least 213 (computerized) or 550 (written), and submit an official report of the score to the Graduate College.

Degree Requirements - M.S.E. Degree Program

Procedures and requirements for the M.S.E. will be as prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. At least 15 credits must be earned from courses numbered 700 or above, of which at least 12 credits must be offered by the College of Engineering.
2. The program of study for each student must be approved by the student's advisory committee. Subject to the approval by the student's graduate committee, the student may choose one of these options: **Thesis Option.** Requires the satisfactory completion of CEE 700 during the first year and 21 credits of approved graduate courses plus six credits of work associated with the master's level thesis, for a total of 30 credits. The final examination will include a defense of thesis. **Non-Thesis Option.** This course-only option requires satisfactory completion of 33 credits of graduate courses approved by the student's advisory committee, of which at least 50 percent must be 700 level offered by the College of Engineering.
3. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00), no grades below C and compliance with the letter and spirit of the *Graduate Catalog* and published policies of the Howard R. Hughes College of Engineering. Additionally, no more than nine credits below B are allowed in the student's graduate program. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.
4. The student's Advising Committee should be composed of at least four members of the UNLV Graduate Faculty of which at least two must be tenured or tenure-track members of the Department of Civil and Environmental Engineering, the third from the Department of Civil and Environmental Engineering or a related field, and the fourth must be appointed by the Graduate College.
5. Each student's program should show suitable breadth and coherence, as specified in the *Graduate Catalog*. Prior to filing, the program must receive approval by the student's committee. An approved program must be filed before the completion of nine credits of course work after admission (regular or provisional). The responsibility rests with the student. Students will be dropped from the graduate engineering program if they neglect this requirement.

Requirements for M.S.E. with special emphasis in Geographic Information Systems.

Procedures and requirements for the M.S.E. in Civil and Environmental Engineering with special emphasis in Geographic Information Systems are as prescribed in the general M.S.E. requirements as stated above, with additional provisions as follows:

1. Seventeen credits must be earned by successful completion of the following courses:
 - * CEE 668 GIS Applications in Civil Engineering
 - CEE/EGG 768 Applied Geographic Information Systems
 - CS 733 Geographic Data Base Systems
 - STA 751 Spatial Analysis and Statistics and one of the following two courses:
 - STA 667 Mathematical Statistics
 - or
 - STA 691 Statistics for Scientists I
2. Recommended undergraduate electives (not for graduate credit) include:
 - CS 135 and Computer Science I and II
 - CS 202
 - or
 - CS 117 Programming for Scientists and Engineers
 - MAT 265 Computing Linear Algebra
3. Recommended graduate electives (not to satisfy remaining Civil and Environmental Engineering M.S.E. credits) include:
 - CS 680 Computer Graphics
 - EGG 769 Applied Modeling with Geographic Information Systems

***Note: Effective Fall 2005 ALL CEG course prefixes will be changed to CEE.**

Master of Science in Transportation

The Master of Science in Transportation degree program is terminal in nature and oriented toward the practice of transportation science, with emphasis on the planning and operations aspects of transportation systems. It is intended for applicants who have backgrounds in areas other than engineering or closely related disciplines, and who either presently work for or aspire to work for transportation agencies or firms.

Admission Requirements - M.S.T. Degree Program

Applicants must have a Bachelor of Science or Bachelor of Arts degree. It is desirable to have a degree in one of the following areas: urban or regional planning, architecture, business, economics, public administration, quantitative geography, computer science, mathematics, operations research, statistics, political science, physical science, or similar discipline. The undergraduate GPA must be at least 3.00 and credit must have been earned in the following subjects, or equivalent subjects, with a grade of B or better: MAT 180 (3 credits), PHY 155 (4 credits), computer Science or Management Information Systems (3 credits), ECO 201 or ECO 202 (3 credits), and STA 391 or ECO 261 (3 credits). CEE 362 (3 credits) also is required of applicants who have not had at least one year of acceptable experience with a

transportation agency. Applicants are required to submit scores from the verbal, analytical, and quantitative portions of the GRE General Test, and a two-page Statement of Objectives indicating a) previous work experience, particularly in transportation, b) the reason they wish to pursue the M.S.T. program; and c) how the degree will be utilized following graduation. Applicants also must submit two letters of recommendation from individuals familiar with their skills and abilities. Contact the department for additional information. All applicants are required to take the verbal, quantitative, and analytical writing portions of the GRE General Test and submit the scores to the Civil and Environmental Engineering department. Successful applicants generally have a combined verbal and quantitative GRE score of at least 1000 and GRE analytical writing score of at least 3. Applicants from countries where English is not the native language must take the Test of English as a Foreign Language, earn scores of at least 213 (computerized) or 550 (written), and submit an official report of the score to the Graduate College.

Degree Requirements - M.S.T. Degree Program

The program of study for each student must be approved by the student's advisory committee. The degree requires completion of 33 credits including a three-credit project; a minimum of 21 credits must be taken in civil engineering courses, and 12 credits may be taken from other departments. All students are required to take CEE 609, CEE 663, CEE 760, and CEE 765; a total of six additional civil engineering elective credits are taken from two options. The program is highly quantitative in nature and requires aptitude and familiarity with analytic and mathematical reasoning. Course work is rigorous, and students in the program will be taking the same courses offered to engineering students. The degree offered is a Master of Science in Transportation (M.S.T.). Completion of the degree does not qualify the student with a nonengineering background to sit for the Fundamentals of Engineering (FE) exam. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00), not grades below C and compliance with the letter and spirit of the Graduate Catalog and published policies of the Howard R. Hughes College of Engineering. Additionally, no more than nine credits below B are allowed in the student's graduate program. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above. The student's Advising Committee should be composed of at least four members of the UNLV Graduate Faculty of which at least two must be tenured or tenure-track members of the Department of Civil and Environmental Engineering, the third from the Department of Civil and Environmental Engineering or a related field, and the fourth must be appointed by the Graduate College.

Master of Science in Construction Management (M.S.C.M.)

The Master of Science in Construction Management (M.S.C.M.) degree provides graduate-level study for those seeking mid- and upper-level management positions in the construction industry. The objective of the graduate degree is to provide a quality graduate educational program that will improve and enhance the capabilities of construction industry personnel. The degree is intended for those who have undergraduate degrees in the fields of construction engineering and management, civil engineering, architecture, and business administration. The primary focus of the program is on management-related topics in construction.

Admission Requirements – M.S.C.M. Degree Program

Applicants must have an earned baccalaureate degree with preferred study in construction, engineering, architecture, or business. Overall undergraduate GPA should be at least 2.75 (4.00=A) for the bachelor's degree or at least 3.00 (4.00=A) for the last two years of undergraduate work. Credit (in semester hours) must have been earned in the following subjects or their equivalents:

MAT 181	Elementary Calculus I (4 credits)
PHY 155	General Physics (4 credits)
ABS/CEE 341	Building Structures I (3 credits)
AAD 125L	Construction Drawings & Detailing (2 credits)
CEM 252	Construction Methods & Materials (3 credits)

The deficiency courses required of a student before entering the M.S.C.M. program will be determined on an individual, case-by-case basis by the Construction Management Graduate Program Committee. The student will be notified in writing of any deficiencies prior to admission to the program. Students with deficiencies exceeding two courses may need to satisfactorily complete them before admission to the graduate program.

Please refer to the several sections under Admission and Registration Information for complete details of Graduate College application deadlines, admission requirements, and application procedures for domestic and international students. Admission is on a competitive basis. Each applicant must submit official transcripts from all previously attended postsecondary institutions to the Graduate College. Each applicant must also submit to the department two letters of recommendation from individuals familiar with their skills and abilities, and a one-page Statement of Objectives describing the reasons why they wish to earn a master's degree and indicating the area of construction in which they wish to pursue graduate work. All applicants are required to take the verbal, quantitative, and analytical writing portions of the GRE General Test and submit the scores to the Civil and Environmental Engineering department. Successful applicants generally have a combined verbal and quantitative GRE score of at least 1000 and GRE analytical writing score of at least 3. Applicants from countries where English is not

the native language must take the Test of English as a Foreign Language, earn scores of at least 213 (computerized) or 550 (written), and submit an official report of the score to the Graduate College.

Degree Requirements - M.S.C.M. Degree Program

Procedures and requirements for the M.S.C.M. degree will be as prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. The student's Advising Committee should be composed of at least four members of the UNLV Graduate Faculty of which at least two must be tenured or tenure-track members of the Department of Civil and Environmental Engineering, the third from the Department of Civil and Environmental Engineering or a related field, and the fourth must be appointed by the Graduate College.
2. The program of study for each student must be approved by the student's advisory committee. Subject to approval by the student's graduate committee, the student may choose either one of the following degree options:
 - a. **Thesis Option.** Requires completion of at least 30 credits, comprised of 18 required 600/700-level credits of CEM and MBA course work (see 3.a and 3.b below), six credits of approved electives, and six credits of thesis research. The final examination will include a defense of the thesis. Completion of a thesis requires the student to make a unique contribution to the existing knowledge in the field of construction management. The effort must include the development of a contemporary research topic and the methodology for investigating the topic. The student is required to undertake the research effort to investigate the topic. The thesis prepared as part of this option shall include a literature review, description of the research topic, methodology, and results, and present conclusions obtained from the research effort and recommendations for further work.
 - b. **Project Option.** Requires completion of at least 36 credits, comprised of 18 required 600/700-level credits of CEM and MBA course work (see 3.a and 3.b below), 15 credits of approved electives (see 3.c below), and three credits of project. The final examination will include a presentation of the project. Completion of a project requires the student to investigate and solve, or propose solutions to, a problem related to the field of construction management. It is expected that the results of this effort will be beneficial for and applied to other construction-related projects or problems. The project report prepared for this option shall include a description of the issue investigated, how the investigation was performed, the results obtained, conclusions regarding the investigation, and recommendations for further work.
3. Program course requirements. Both graduate degree options:
 - a. Require the student to successfully complete MBA 702 in the first two semesters of study.

- b. Require the student to successfully complete CEM 651, CEM 653, CEM 700, CEM 750 or CEM 751, CEM 685 or CEM 740 or CEM 775, and MBA 702. Other courses may be substituted upon written permission of the graduate faculty advisor. Students who have credit in CEM 451 and CEM 453 or equivalent courses will select two other courses from the approved elective list.
 - c. Require that each student's graduate program should show suitable breadth and coherence. As specified in the *Graduate Catalog*, the program of study will be jointly developed by the student and advisor, approved by the student's committee, and then filed with the Graduate College. An approved program must be filed before the completion of nine credits of course work after admission to the program. The responsibility for meeting this requirement rests with the student. Students will be placed on probation or separated from the program if they neglect this requirement.
4. Performance Requirements. Students must make satisfactory progress and comply with all Graduate College and Howard R. Hughes College of Engineering policies. If progress is not satisfactory, probation and separation from the graduate program may result, in accordance with the rules of the Graduate College. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00), not grades below C and compliance with the letter and spirit of the Graduate Catalog and published policies of the Howard R. Hughes College of Engineering. Additionally, no more than nine credits below B are allowed in the student's graduate program. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.

Doctor of Philosophy in Engineering

Admission Requirements – Doctoral Degree Program

Admission to the program leading to the Ph.D. in Engineering in the field of Civil and Environmental Engineering is open to those students completing the following requirements:

1. Application must be made to the Department of Civil and Environmental Engineering. Applications must include all documentation as required by the Graduate College. The Department of Civil and Environmental Engineering will admit the student and supervise the student's Ph.D. program.
2. The applicant must have a Master of Science in Engineering degree or equivalent with a major in civil engineering or a closely allied field. Students with nonengineering backgrounds will be required to complete a set of course work requirements that will assure successful completion of the Ph.D. specialization

and qualify the student to sit for the Fundamentals of Engineering (FE) exam. Special cases will be decided upon by the Graduate Program Committee (GPC).

3. The applicant must submit a written statement of purpose indicating interests and objectives in working toward a Ph.D. degree. In addition, three letters of recommendation for Ph.D.-level study must be submitted.
4. Applicants from countries where English is not the native language must take the Test of English as a Foreign Language, earn scores of at least 213 (computerized) or 550 (written), and submit an official report of the score to the Graduate College.
5. The GPC will examine the applicant's academic record and will make the final determination of the applicant's admissibility to the Ph.D. program. In general, a minimum post-baccalaureate GPA of 3.20 on a 4.00 scale or equivalent is required for admission.
6. All applicants are required to take the verbal, quantitative, and analytical writing portions of the GRE General Test and submit the scores to the Civil and Environmental Engineering department. Successful applicants generally have a combined verbal and quantitative GRE score of at least 1000 and GRE analytical writing score of at least 3.
7. The applicant must be formally admitted by UNLV's Graduate College.

Degree Requirements – Doctoral Degree Program

The degree requirements for the Ph.D. in Engineering in the Department of Civil and Environmental Engineering include the following:

1. A Doctoral Advisory Committee composed of at least five members of the UNLV graduate faculty is to be formed for the student. At least three of the committee members must be from tenured or tenure-track members of the Department of Civil and Environmental Engineering, the fourth from the Department of Civil and Environmental Engineering or a related field, and the fifth must be appointed by the Graduate College.
2. The program of study must be submitted by the second semester of study. The program of study is to be prepared by the student and his/her doctoral advisor, and must be approved by the student's Doctoral Advisory Committee and the GPC.
3. A minimum of 27 credit hours of course work beyond the degree of Master of Science in Engineering or equivalent is required. A minimum of 18 of these credits must be 700-level courses. Doctoral students must complete CEE 700 prior to taking the Qualifying Examination. For students who have completed CEE 700, or equivalent, during their Master of Science studies, CEE 700 may be waived and replaced by another 700-level course. The student's Doctoral Advisory Committee may add additional requirements in accordance with the individual's background and area of study.
4. In addition to these course requirements, a dissertation consisting of at least 18 credits (CEE 799) is required.

5. Students whose mother tongue is not English must demonstrate a satisfactory command of the English language by passing the advanced level on the Michigan test during the first year of study.
6. In order to show breadth and depth of knowledge in his/her discipline, the doctoral student must pass either a written qualifying exam, an oral qualifying exam, or both as determined by the student's Doctoral Advisory Committee. These examinations are prepared by the faculty and supervised by the GPC. These qualifying exams must be scheduled after the completion of one year of study but not before the completion of at least 12 credits of course work.
7. The doctoral student must pass a preliminary exam consisting of the preparation of a written proposal for the dissertation research followed by an oral defense of the proposal. The dissertation must be approved by the student's Doctoral Advisory Committee. Students are advanced to candidacy for the Ph.D. upon the completion of all course work and approval of the dissertation research proposal.
8. All requirements for the Ph.D. are met upon the satisfactory completion of the proposed research, the submission of a satisfactory dissertation, and the successful oral defense of the dissertation before the Doctoral Advisory Committee.

General Engineering

EKG 768

4 credits

Applied Geographic Information Systems

Review of data structures and algorithms for surfaces, volumes and time, elevation models, spatial interpolation. Error modelling and data uncertainty. Visualization of spatial data. Decision making in a GIS context. Emphasis on interdisciplinary group project constructing a data base and maps involving several areas of expertise using popular GIS software. Prerequisites: EGG 668, STA 751, and CS 733 or CS 432.

EKG 769

3 credits

Applied Modeling with Geographic Information Systems

Design and interfacing of civil engineering models of transportation and finite element, finite difference, and hydrologic models with geographic data base systems. Applications in general air, water, transportation, and land use management. Prerequisite: EGG 768.

Civil Engineering

Effective Fall 2005, CEG course prefixes will change to CEE.

CEG 700 3 credits

Research Methods in Civil and Environmental Engineering

Methods to improve and develop research skills and prepare students for professional careers at the graduate level. Includes principles of scientific research, ethics, writing skills, methods for compiling scientific literature, identification of research questions and specific hypotheses, presentation of research results, writing research papers, proposal preparation, preparation of grant proposals, thesis and dissertation.

CEG 703 3 credits

Turbulence

Topics include the origin of turbulence, dynamics of turbulent flows, free shear flows, bounded shear flows, transport phenomena, semiempirical theories, statistical descriptions, spectral dynamics. Prerequisites: Graduate standing and MEG 700. 3 credits.

CEG 704 3 credits

Environmental & Water Systems

Introduction to techniques to evaluating alternatives in environmental and water resources systems. Topics include southwest U.S. water economic analysis, optimization using linear and dynamic programming, systems modeling using STELLA, analysis of droughts, and current research topics. Applications focus on surface water systems, operation, and reservoirs, water distribution and environmental systems. Prerequisite: CEG 403.

CEG 705 3 credits

Fluid Dynamics in Porous Media I

Engineering analysis of fluid flows in porous media. Includes development of the basic equations, analysis of steady and unsteady flows, multidimensional flows, analytical solutions using conformal mapping, analog methods, finite difference and finite element modeling, and transport phenomena. Prerequisite: MEG 700 or consent of instructor.

CEG 706 3 credits

Fluid Dynamics in Porous Media II

Finite element solution of flow problems in porous media. Topics include steady and unsteady saturated flows, unsaturated flows, mass transport problems, and coupled transport problems such as combined mass-thermal flows. Prerequisite: MEG 700 or consent of instructor.

CEG 708 3 credits

Hydraulic Transients

Analysis of unsteady fluid flow problems in liquid and gas transmission systems of practical interest. Emphasis placed on computer solutions. Topics include methods of characteristics, water-hammer, effect of pumps, turbines, valves, etc.; column separation; control of transient

conditions; oscillatory flow and resonance; open channel transient flow. Prerequisite: Graduate standing or consent of instructor.

CEG 709 3 credits

Numerical Methods in Mechanics

Numerical solution of partial differential equations arising from problems in mechanics. Emphasis on finite difference techniques. Topics include classification of equations: solutions of elliptic, parabolic, and hyperbolic equations; stability, consistency and convergence and nonlinear equations; multidimensional problems; systems of equations; discontinuous solutions. Prerequisite: MAT 465 or MEG 445 or consent of instructor.

CEG 711 3 credits

Continuum Mechanics

Matrices and tensors, stress deformation and flow, compatibility conditions, constitutive equations, field equations and boundary conditions in fluids and solids, applications in solid and fluid mechanics. Prerequisites: MAT 429 and graduate standing.

CEG 722 3 credits

Advanced Air Pollution Control

Fundamental chemical and physical principles of generation and control of air pollutants, and applications to pollution control equipment. Pollutant and particle formation during combustion. Gas absorption and absorption fundamentals and tower/column design. Pollution control strategies. Prerequisites: CEG 452/652, MAT 430, MEG 311, or equivalents. Strongly recommended: MEG 314 and MAT 665 or equivalent.

CEG 731 3 credits

Pavement Materials and Design

In-depth study of pavement materials such as soils, asphaltic concrete and Portland cement concrete; analytical and empirical methods for design of flexible and rigid pavements; pavement rehabilitation management. Includes highway and airfield pavements. Prerequisites: CEG 334, CEG 334L, CEG 362.

CEG 732 3 credits

Advanced Foundation Engineering

Detailed study and analysis of the mechanical properties of soils with applications to foundation behavior. Prerequisites: CEG 334, CEG 334L, CEG 435.

CEG 734 3 credits

Advanced Soil Mechanics

Stress-strain properties and shear strength of soil: settlements and stability analysis. Prerequisites: CEG 334, CEG 334L.

CEG 735 **3 credits**

Earth Dams and Embankments

Principles governing the flow of water through soils and their applications to design of earth dams and embankments. Methods of earth dam design, including earthquake design, theory of wells, and groundwater flow. Prerequisites: CEG 334 and CEG 478/678.

CEG 736 **3 credits**

Earth Slopes and Retaining Structures

Analysis and design of stable earth slopes, including slopes cut from natural deposits and engineered embankments. Analysis and design of earth retaining structures. Both theoretical and practical aspects of design discussed. Prerequisites: CEG 334, CEG 334L.

CEG 737 **3 credits**

Soil Dynamics and Earthquake Engineering

Use of dynamics in geotechnical engineering, for nondestructive characterization of engineering materials, and for design of foundations subjected to dynamic loads. Geotechnical aspects of earthquake engineering, particularly effect of soils on ground-surface motions, and soil liquefaction during earthquakes. Prerequisites: CEG 334, CEG 334L.

CEG 741

Design of Highway Bridge Structures **3 credits**

Review of types of highway bridges. Application of the AASHTO Bridge Specifications including dead load, live load and impact. Design of steel, reinforced and prestressed concrete bridge superstructures and their substructures. Span lengths through 150 feet. Prerequisites: CEG 443, CEG 444 and graduate standing.

CEG 743 **3 credits**

Design of Masonry Structures

Study of the principles of masonry design applied to structural design of building components and retaining walls. Discussion of wind and seismic loadings. Analysis and design of shear walls. Prerequisites: CEG 443 and graduate standing.

CEG 744 **3 credits**

Design of Prestressed/Post-Tensioned Concrete Structures

Study of principles of prestressed concrete, both pre-tensioned and post-tensioned, applied to structural design of buildings and bridges. Discussion of effects of lateral loads on structures. Introduction to analysis and design of shear walls. Discussion of connections between members. Prerequisites: CEG 443 and graduate standing.

CEG 745 **3 credits**

Advanced Topics in Concrete and Steel Structures

Advanced theoretical analysis and design of reinforced concrete, prestressed and composite steel-concrete structures. Topics include beam torsion, stability of tall columns, local buckling effects, biaxially loaded columns,

composite decks, ponding on steel roofs, and introduction to prestressed concrete structures. Prerequisite: CEG 443 or consent of instructor.

CEG 747 **3 credits**

Introduction to Analysis and Design of Plates and Shells

Introduction to the analysis and design of plates and shell structures. Bending of flat rectangular and circular plates with various boundary and loading conditions. Membrane analysis of spherical, cylindrical shells, and shells of revolution with ring reinforcement. Prerequisites: CEG 342 and graduate standing.

CEG 748 **3 credits**

Advanced Design of Timber Structures

Study of wood as an engineering material used in various types of construction. Strength properties of timber, structural properties of plywood, analysis and design of timber beams, timber columns, analysis and design of connections using nails, bolts, and adhesives. Prerequisites: MAT 429 and any one of CEG 443, 444 or 448.

CEG 749 **3 credits**

Advanced Topics in Finite Element Analysis

Properties and applications of isoparametric elements, solids of revolution elements, plate bending elements, finite elements of dynamics, vibrations and buckling instability. Introduction to nonlinear problems using finite element analysis. Prerequisite: CEG 478 or consent of instructor.

CEG 750 **3 credits**

Urban Runoff Quality and Control

Study of the quality of urban runoff during wet and dry periods. Topics include: review of hydrologic concepts, modeling water quantity and quality in stormwater systems, water quality of non-point sources, control structures or Best Management Practices (BMPs), evaluation of current research, discussion of current regulations. Prerequisites: CEG 453 and CEG 450 or consent of instructor.

CEG 751 **3 credits**

Advanced Topics in Wastewater Engineering

Fundamentals of aeration and gas transfer, natural systems for effluent polishing, impacts of effluent discharges in natural water systems. Wastewater reuse issues. Sludge management including dewatering, conditioning, composting, and final disposal. Prerequisites: Graduate standing and CEG 450/650 or equivalent.

CEG 752 **3 credits**

Advanced Water and Wastewater Analysis

Fundamentals and quantitative analysis or the standard methods used by environmental engineers to analyze drinking water and wastewater and control water quality. Topics include total organic carbon, solids analysis, alkalimetry, UV/VIS spectrophotometry, carbon absorption, ion exchange, AA spectrometry, ion chromatography (IC), phase partitioning, advanced oxidation. Prerequisite: CEG 451/651 and graduate standing, or consent of instructor.

CEG 753 **Air Pollution Atmospheric Processes** **3 credits**

Fundamentals of aerosol composition, formation and coagulation. Atmospheric photochemistry and atmospheric transport. Computer methods emphasized. Applications to pollution control strategies for urban areas. Prerequisites: CS 117, CEG 452/652 or equivalent, MAT 429.

CEG 754 **Biochemical Wastewater Treatment Fundamentals** **3 credits**

Underlying chemical, microbiological, and biochemical principles considered when designing suspended and attached growth biological processes for water quality control. Topics covered include activated sludge design, selector design, filamentous growth control, toxicity to biological systems, biofilm processes, and design of nutrient (phosphorus and nitrogen) removal systems. Prerequisite: CEG 450/650 or equivalent.

CEG 755 **Advanced Physicochemical Methods for Water Treatment** **3 credits**

Fundamentals of chemical equilibrium, ion exchange, chemical kinetics, gas transfer and absorption theory. Applications to design of water treatment facilities, including disinfection basins, ion exchange and activated carbon columns for treatment of water for drinking, agriculture, and industry. Prerequisites: CEG 455/655 and MAT 429 or equivalent.

CEG 756 **Advanced Waste Treatment Design** **3 credits**

Application of optimization methods to the physical, chemical, and biological reaction engineering principles used in air, water, and solid waste treatment plant design. Review and critique of plans for existing treatment works, and incorporation of new technologies. Waste minimization. Prerequisite: CEG 450/650 or CEG 455/655 or equivalent.

CEG 757 **Engineering Modeling of Natural Systems** **3 credits**

Application of physical, chemical, and ecological concepts to mathematical modelling of fluid mixing, nutrient cycling and population dynamics. Applications to waste treatment and impacts in natural water systems. Prerequisites: CS 117, CEG 450/650, MAT 429.

CEG 758 **Air Quality Modeling** **3 credits**

Data requirements for inputs to air quality models. Review of photochemical and transport processes used in models. Influence of local topography and meteorology. Review of photochemical computer models. Use of models in evaluation of strategies for improvement of air quality. Prerequisite: CEG 753 or equivalent; course in numerical methods recommended.

CEG 759 **Mass Transfer in Environmental Systems** **3 credits**

Fundamentals of mass transfer by diffusion and advection. Solutions to steady-state and transient problems in several dimensions. Applications to natural and engineered systems. Prerequisites: CEG 303, MAT 430, and MEG 400/600 or MEG 700, or equivalent, or consent of instructor.

CEG 760 **Transportation Planning** **3 credits**

Network representation methods; minimum-path trees; traffic assignment algorithms and their performance; trip distribution models; travel surveys and data needs; applications of statistical methods to develop methods of ownership, trip generation, vehicle occupancy, and model choice. Prerequisites: CEG 362 and graduate standing, or consent of instructor.

CEG 761 **Transportation Demand Analysis** **3 credits**

Problems dealing with transportation systems as they affect travel behavior; study of the demand for transportation-theoretical concepts and analytical methods; urban and regional travel demand analysis, forecasting methods and behavioral demand models. Prerequisites: CEG 362 and graduate standing, or consent of instructor.

CEG 762 **Operations Research Applications in Civil Engineering** **3 credits**

Analysis of civil engineering systems using operations research methods and techniques. Methods covered include optimization models in deterministic systems, network models, and modeling of stochastic systems, including queuing theory. Applications drawn from various civil engineering contexts, particularly transportation systems. Prerequisite: MAT 465 or STA 411, or consent of instructor.

CEG 763 **Advanced Traffic Engineering** **3 credits**

Theories of traffic flow and signal operations with application to activated, coordinated, and networked intersections using computerized models such as PASSER, NETSIM, TRANSYT, SOAP, CALSIG. Analysis of arterial/freeway operations techniques including HOV and reverse lanes, ramp metering, freeway surveillance, TSM, demand modification. Evaluation of objectives, measures of effectiveness. Two hours lecture, three hours laboratory. Prerequisites: CEG 463/663 or consent of instructor.

CEG 764 **Air Transportation** **3 credits**

Nature of civil aviation, aviation system planning, airline operations, aircraft characteristics, airline economics, structure of the airline industry, aircraft fleet planning and scheduling, aviation safety. Prerequisites: CEG 362 and graduate standing, or consent of instructor.

CEG 765 **Public Transportation Systems** **3 credits**

Analysis and evaluation of mass transit systems; their operation and management: demand and cost analysis; route design, schedules and fare policy. Technology of transit systems including vehicles and structures. Transit financing. Impact on land use and environment. Prerequisites: CEG 362 and graduate standing, or consent of instructor.

CEG 766 **Analysis of Hazardous Materials Transportation** **3 credits**

Hazardous materials transportation analysis using probabilistic risk assessment, including concept measures, models, and methodologies; routing analysis including measures and models, background and scope of hazardous materials transportation issues; mitigation including engineering applications in risk management and emergency preparedness. Prerequisites: CEG 362 and graduate standing, or consent of instructor.

CEG 767 **Human Factors in Transportation Engineering** **3 credits**

Application of human factors to transportation system planning, design, operation, and management with emphasis on transportation safety; ergonomic principles; driver, vehicle, and guideway interaction; highway safety problems; human factors analytical methods; engineering and management solutions. Prerequisite: CEG 362, or consent of instructor.

CEG 768 **Applied Geographic Information Systems** **4 credits**

(Same as EGG 768.) Review of data structures and algorithms for surfaces, volumes and time, elevation models, spatial interpolation. Error modeling and data uncertainty. Visualization of spatial data. Decision making in a GIS context. Emphasis on interdisciplinary group project constructing a data base and maps involving several areas of expertise using popular GIS software. Prerequisites: EGG 668, STA 751, and CS 733 or CS 432.

CEG 770 **Shell Structures, Bending and Membrane Theories** **3 credits**

Analysis and design of curved thin shell structures using two methods: the approximate membrane force analysis and the exact bending moment and membrane force analysis combined. Introductions provided to the theory of elasticity and specialized solutions to partial differential equations as needed for the analysis of shell structures. Prerequisites: CEG 342 and graduate standing.

CEG 772 **Theory of Composite Structures** **3 credits**

Analysis and design of structures using composite materials and sandwich construction. Elasticity and failure theories of fiber composites and laminates discussed, unidirectional, multidirectional and random fiber reinforcement considered. Prerequisites: CEG 342 and graduate standing.

CEG 774 **Introduction to Theory of Elasticity and Plasticity I** **3 credits**

Introduction to theoretical and applied elasticity and plasticity theory-solutions to engineering problems in structural mechanics and geotechnical engineering. Response of isotropic, orthotropic and layered media to applied stresses and strains. Prerequisites: MAT 429 and graduate standing only.

CEG 775 **Seismic Response of Structures** **3 credits**

Application of principles of vibration theory to structures. Determination of natural frequencies and mode shapes using classical methods and energy techniques. Response of structures to harmonic, impulse, periodic and earthquake loadings. Prerequisites: CEG 342 and graduate standing.

CEG 776 **Experimental Techniques in Structural Mechanics** **3 credits**

Application of various experimental techniques to stress analysis problems. Comparison of experimental and analytical methods. Theory of electric resistance strain gages. Brittle lacquer coatings and their photoelasticity and its application including photoelastic coatings. Introduction to similitude. Prerequisite: CEG 342 and graduate standing.

CEG 778 **Theory of Elastic Stability** **3 credits**

Buckling of centrally loaded and eccentrically loaded compression members. Variational methods of determining critical loads. Stability of rigid frame members, effective lengths of compression members in trusses, lateral buckling of beams, torsional buckling. Buckling of compressed rings and curved bars. Prerequisites: CEG 342 and graduate standing.

CEG 791 **Independent Study in Civil Engineering** **1-3 credits**

Independent study of a selected civil engineering topic. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in civil engineering and consent of instructor.

CEG 795 **Special Topics in Civil Engineering** **1-6 credits**

Outlet for experimental and other topics of current interest. Topics and credits to be announced. May have a laboratory. May be repeated for credit. Prerequisites: Graduate standing in civil engineering and consent of instructor.

CEG 796 **Design Project in Civil Engineering** **1-3 credits**

Synthesis course to involve students in the design process from analysis and proposal to solution. May be repeated to a maximum of three credits. Not permitted for students pursuing the M.S.E. Thesis option or for those in the Ph.D. program. Prerequisites: Graduate standing in civil engineering and consent of instructor.

CEG 797 **3-6 credits**
Thesis in Civil Engineering

May be repeated but only six credits will be applied to program. S/F grading only. Prerequisite: Graduate standing in civil engineering.

CEG 799 **1-6 credits**
Dissertation Research

Research analysis and writing towards completion of dissertation and subsequent defense. May be repeated with a maximum of 18 credits allowed to be used towards the degree. S/F grading only. Prerequisites: Graduate standing in Ph.D. program and consent of advisor.

A number of upper-division engineering courses are open to graduate students, provided they demonstrate a level of accomplishment suitable to graduate study. The *Undergraduate Catalog* should be consulted for descriptions of the courses. In the *Undergraduate Catalog*, the courses are numbered as 4XX, where the XX represents the same last two digits as the 600 courses listed below (for example, the description for CEG 604 appears under CEG 404). These include:

CEG 604	Open Channel Flow
CEG 606	Engineering Hydrology
CEG 609	Engineering Project Management
CEG 610	Highway Construction Materials
CEG 611	Advanced Mechanical Properties of Engineering Materials
CEG 621	Professional Engineering Practice
CEG 632	Geological Engineering
CEG 634	Rock Mechanics
CEG 635	Foundations Engineering
CEG 636	Engineering Geophysics
CEG 643	Concrete Design
CEG 644	Steel Structural Design
CEG 648	Design of Timber Structures
CEG 650	Unit Operations and Processes in Environmental Engineering
CEG 650L	Unit Operations and Processes Laboratory
CEG 651	Water and Wastewater Quality Analysis
CEG 652	Air Pollution Control Fundamentals
CEG 654	Solid and Hazardous Wastes Engineering (formerly CEG 633)
CEG 655	Chemical Processes for Water Quality Control
CEG 663	Traffic Engineering
CEG 664	Airport Design
CEG 665	Fire Protection Engineering
CEG 666	Geometric Design of Highways
CEG 667	Computer Applications in Transportation Engineering
CEG 668	GIS Applications in Civil Engineering
CEG 678	Applied Finite Element Analysis
CEG 681	Earthquake Engineering
CEG 683	Design of Underground Structures
CEG 695	Special Topics in Engineering
EKG 651	Ergonomics

Construction Management

CEM 700 **1 credit**
Construction Seminar I

Presentation and discussions by faculty and local construction industry representatives on current construction engineering and management research and practice topics. Introduction to research process, research information resources, and literature review. Prerequisites: Graduate standing.

CEM 701 **1 credit**
Construction Seminar II

Presentations by students on research studies or projects. Presentations and discussions by local construction industry representatives on current construction engineering and management research and practice topics. Prerequisite: CEM 700.

CEM 740 **3 credits**
Construction Safety and Performance Improvement

Introduction to construction safety issues, regulations and ways to improve safety on the job site. Accidents and their causes, OSHA regulations, and worker safety programs. Productivity concepts, data collection, and analysis of data and factors affecting construction productivity. Means for improving production and study of productivity improvement programs. Prerequisites: CEG 342 or ABS 341, and graduate standing.

CEM 750 **3 credits**
Advanced Construction Scheduling

Models of network theory and non-network theory for construction scheduling. Systems theory, resource leveling and resource algorithms, project diagnostics, optimum workforce/equipment movement, and as-built schedule coordination. Cost control and computer applications, and expert systems. Case studies. Prerequisites: CEM 453/653 and graduate standing.

CEM 751 **3 credits**
Advanced Construction Estimating

Advanced topics in construction estimating including value engineering, pricing strategies, and computer concepts. Development of estimating data. Computer-aided design and cost integration. Range, factor, and parametric estimating. Production factors. Prerequisite: Graduate standing or consent of instructor.

CEM 775 **3 credits**
Construction Operations and Management

Theory and practice of construction operations and management. Roles of the designer, owner, constructor, and construction manager. Systems approach to project, firm, and organization issues for construction management. Decision modeling. Readings, case studies, and analysis of construction problems and solutions. Computer applications, case studies. Prerequisites: EGG 307, CEM 740, CEM 750, CEM 751. May be taken concurrently with CEM 751.

CEM 780 **3 credits**
Construction Engineering

Advanced topics in construction engineering addressing techniques and sequences employed in the construction of civil engineering facilities. Focus on methods improvement and the analysis and design of temporary structures, formwork, and rigging for construction. Case studies. Prerequisites: EGG 307, CEG 342, CEM 740, CEM 751. May be taken concurrently with CEM 751.

CEM 793 **1-3 credits**
Advanced Independent Study

Advanced independent study of a selected construction topic. Paper required. May be repeated to a maximum of six credits. Prerequisites: Graduate standing and consent of instructor.

CEM 795 **1-4 credits**
Advanced Special Topics in Construction Management

Outlet for experimental and other topics of interest in advanced construction management. Paper required. Topics and credits to be announced. May be repeated to a maximum of eight credits. Prerequisites: Graduate standing and consent of instructor.

CEM 796 **1-3 credits**
Special Project in Construction Engineering and Management

Development and undertaking of a project investigating a topic of interest related to construction engineering or construction management. Preparation of a project report. Prerequisite: Graduate standing. May be repeated for a maximum of three credits.

CEM 797 **1-3 credits**
Research Thesis in Construction Engineering and Management

Development and undertaking of a research study on a contemporary topic related to construction engineering or construction management. Preparation and presentation of a research thesis. May be repeated for a maximum of six credits. Prerequisite: Graduate standing.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

CEM 632	Temporary Construction Structures
CEM 651	Construction Estimating I
CEM 651L	Construction Estimating Laboratory
CEM 653	Construction Scheduling and Resource Optimization
CEM 685	Construction Law and Contracts
CEM 693	Independent Study
CEM 695	Special Topics in Construction Management

School of Computer Science

Director

Berghel, Hal (1999), Professor; B.A., M.A., Ph.D., University of Nebraska, Lincoln.

Graduate Coordinator

Datta, Ajoy K. (1988), Professor; B.S., M.S., Ph.D., Jadavpur University.

Graduate Faculty

Bein, Wolfgang (1998), Associate Professor; M.S., Ph.D., University of Osnabruck.

Gewali, Laxmi P. (1989), Professor; B.S., Gauhati University, India; M.S., Tribhuvan University, Nepal; M.S., Ph.D., University of Texas-Dallas.

Harrison, John (2002), Assistant Professor, B.S., M.S., University of Nevada, Las Vegas; Ph.D., Arizona State University.

Kim, Yoohwan (2004), Assistant Professor; B.A., Seoul National University, Korea. M.S., Ph.D., Case Western Reserve University.

Larmore, Lawrence L. (1994), Professor; B.S., Tulane University; Ph.D., Northwestern University; Ph.D., University of California, Irvine.

Minor, John T. (1985), Associate Professor; B.A., Rice University; Ph.D., University of Texas, Austin.

Nartker, Thomas A. (1986), Professor; B.S., University of Dayton; M.S., University of Tennessee; Ph.D., Texas A&M University.

Ogawa, Roy H. (1983), Associate Professor; B.A., M.A., University of Hawaii; Ph.D., University of California, Berkeley.

Pedersen, Jan B. (2003), Assistant Professor; B.S., M.S., University of Aarhus, Denmark; Ph.D., University of British Columbia.

Taghva, Sidkazem (1987), Professor; B.S., Pahlavi University; M.S., University of Kansas; Ph.D., University of Iowa.

Yfantis, Evangelos A. (1979), Professor; B.S., University of Athens; M.S., Fairleigh Dickinson University; M.S., Rutgers University; M.S., New Jersey Institute of Technology; Ph.D., University of Wyoming.

The School of Computer Science has experienced unprecedented growth in both the number of students and the professional accomplishments in the past few years. Since 1995 the number of student credit hours of instruction offered by the school has more than doubled. During that same period, the research funding of the school exceeded \$14,000,000 while the faculty have produced 200 refereed journal publications and book chapters, seven books, and given nearly 500 invited presentations and keynote addresses at professional conferences and meetings worldwide.

Five Outstanding Teaching Awards, fellowships in both the ACM and IEEE, nearly a dozen international awards from the ACM and IEEE for outstanding research and professional service, editorships of over a half-dozen major journals, participation in over 300 professional conferences, nearly 1,000 citations to their published work, and over 500,000 hits to faculty Web sites confirm the significant impact of their professional activity.

As a graduate student you will become an active participant in the exciting research activities in the school by working alongside the faculty who have achieved this success. You will find the school's faculty cohesive and

collegial, and passionate about both their teaching and research activities. Ample opportunities exist for research support through affiliated research centers (below) for students who have demonstrated superior academic prowess.

The School of Computer Science offers programs leading to the Master of Science and the Doctor of Philosophy degrees in Computer Science. Areas of school strength include both theoretical and experimental computer science, especially within such areas as information and network security, Internet forensics, real-time algorithms, information retrieval, document analysis, graphics, computational geometry, networking and distributed systems, information customization, cybermedia, innovative Internet and Web technology, and interactive computing.

The communication infrastructure is an Intranet based on a number of local area networks. The environment includes modern multi-protocol routers and switches. The systems and networks are continuously upgraded with current technology. The college is connected to both the commercial Internet and Internet II.

The distributed computing environment of the College of Engineering is housed in the Thomas T. Beam Engineering Complex. Several hundred modern computing systems are operated for purposes of instruction, experimentation, laboratory instrument control, data acquisition, and research. More than 50 of the systems are in public laboratories accessible to all engineering students. These laboratories contain both Windows and *nix/Linux clients and servers in a variety of modern configurations.

The Center for the Advanced Study of algorithms (CASA) is a research center with a focus on information technology, for both theoretical and applied research, including such diverse areas as online algorithms, combinatorial optimization, approximation techniques, and adaptive methods. CASA (sigact.acm.org/casa) facilitates national and international collaborations, interdisciplinary work across the campus and with other academic entities.

The Center for Cybermedia Research (ccr.i2.nsee.edu) is a research facility located about one mile from campus. The mission of the center is to perform world-class theoretical and experimental research in cybermedia and to engage in innovation transfer to its stakeholders and affiliates in the university, private and public sectors. CCR consists of four autonomous laboratories in multimedia and networking, robots and computer vision, digital image processing, and Internet forensics.

The Identity Theft and Financial Fraud Research and Operations Center (www.itffroc.org) is a national research center whose mission is to provide technology support to and a collaborative testbed for, law enforcement as they investigate and prosecute identity theft and financial fraud. ITFFROC is a joint partnership between UNLV and the Las Vegas Metropolitan Police Department.

The Information Science Research Institute (ISRI) is associated with the school and maintains a network of workstations and supporting file servers. This dedicated research network provides an environment capable of supporting large scale experiments in the area of document understanding, including optical character recognition, information retrieval, and automatic classification.

In addition, for other engineering disciplines, tools for symbolic computer algebra, numerical analysis, graphical display and manipulation of data are available. Two open computer laboratories provide access to modern workstations and personal computers for all members of the college. Our graphics and image processing laboratory is equipped with machines from Silicon Graphics, including a parallel Onyx, a 24 bit color Indigo and eight 24 bit color Indys with geometry engines and two 4Ds with geometry engines.

The Web Design and Cybermedia Lab is dedicated to content development for Internet and Web-based technology research on dual processor Intel workstations with the latest software and hardware support for stand-alone multimedia creation, Web-based design, and interactive, network-based content.

Students can also obtain permission to access the machines of the National Supercomputer Center for Energy and the Environment (NSCEE).

Master of Science in Computer Science

Admission Requirements - M.S.C.S. Degree Program

Applicants must submit the following to the Graduate College: an application and official transcripts of all college-level work. Two letters of recommendation concerning the student's potential for succeeding in the graduate program, another set of official transcripts, and the results of the Graduate Record Examination current to within five years should be sent directly to the school. In addition, applicants must have completed courses and their prerequisites equivalent to our undergraduate Programming Languages (CS 326), Operating Systems (CS 370), Discrete Mathematics II (MATH 351), and Statistical Methods I (STAT 411) with an average grade of B or better. The Computer Science Admission Committee may elect to admit an outstanding applicant who has not satisfied all of the background requirements on a conditional basis. The student must complete these requirements before full admission to the program is granted.

For students who want to be considered for graduate assistantships, the deadline for all application materials is March 1 for the fall semester and November 1 for the spring semester. Otherwise, applications will be accepted up to June 15 for fall admission and November 15 for spring admission for domestic students and May 1 for fall and October 1 for spring for international students.

Degree Requirements - M.S.C.S. Degree Program

The student must pass at least 30 credits of 600- and 700-level courses with grades of C or better, subject to the following conditions and Graduate College policy:

1. At least 24 credits must be in computer science. Non-CS courses must be related to the student's research area and be approved by the school graduate committee.
2. At least 18 credits of computer science courses must be at the 700-level.
3. If equivalent courses have not been taken previously, CS 656, 677, and 660 must be included.

4. At most six credits of CS 791, (Thesis Option) or three credits of CS 790 (Project Option) can be included.

The student must also select either the Thesis Option or the Project Option. If the Thesis Option is selected, the student must submit a thesis conforming to the specifications of the Graduate College and pass a final oral examination covering the thesis and relevant course work. For the Project Option, the student must complete a computer science project and report approved by his advisor and pass a final oral examination over the project and relevant course work.

Courses in which the student earns a grade lower than C cannot be included in his or her program, and the student's total grade point average (GPA) must be 3.00 or higher while in the program. A student whose GPA falls below 3.00 will be placed on academic probation. If during the next regular semester the GPA stays below 3.00, then the student will be dropped from the graduate program.

Doctor of Philosophy in Computer Science

Admission Requirements - Doctoral Degree Program

In addition to the requirements of the Graduate College, applicants for admission to the Ph.D. program in computer science must meet the following:

1. Students are expected to have a master's degree in computer science before applying to the Ph.D. program. On rare occasions, an unusually capable student may be admitted to work directly for the Ph.D. degree without having a master's degree.
2. A GPA of 3.30 (on a 4.00 scale) or higher in postbaccalaureate course work is required for admission.
3. At least three letters of recommendation (preferably from academic sources) attesting to the applicant's professional competence and academic potential are required.
4. A personal statement of purpose, which should be as specific as possible and should include the applicant's objectives and area(s) of interest, is required.
5. Satisfactory scores on both the general test of the Graduate Record Examination (GRE) and from the Computer Science subject test (C29) are required. Official score reports from the last five years are acceptable.

Degree Requirements - Doctoral Degree Program

The Ph.D. degree is awarded to a candidate who has demonstrated breadth of knowledge in computer science in general and has displayed depth of knowledge in the area of specialty as well as the ability to make original contributions to the body of knowledge in this field.

To successfully complete the Ph.D. program, a student must fulfill all the Graduate College degree requirements and the following requirements:

1. Complete 48 credits of course work.
2. Satisfactorily pass a written comprehensive examination.
3. Satisfactorily pass an oral qualifying examination.

4. Prepare a dissertation that must be acceptable to his or her Ph.D. committee.
5. Satisfactorily pass an oral defense of the dissertation.
6. Maintain a satisfactory rate of progress.

Course Requirements

A student entering the Ph.D. program with a master's degree in computer science is required to take at least 48 credits of course work subject to the following conditions:

1. At least 42 credits must be in computer science.
2. At least 18 credits of computer science courses must be at the 700 level (excluding CS 799 credits).
3. Must include exactly three credits of CS 792 (Research Seminar).
4. Must include a maximum of 18 credits of CS 799 (Dissertation Research).

A student entering the Ph.D. program with a bachelor's degree is required to take at least 24 extra credits of 600- and 700-level computer science courses in addition to the above 48 credits (at least half of them must be at the 700 level).

The Comprehensive Examination

The written comprehensive examination will be given twice a year. The comprehensives will assess the student's breadth of knowledge through three examinations covering the six Core Areas listed below and another examination in two other areas of his or her choice.

Core Areas

1. Automata and formal languages; Algorithms and data structures
2. Programming languages; Compiler construction
3. Computer architecture; Operating systems

Application areas

1. Artificial intelligence
2. Computer graphics and image processing
3. Computer simulation and networks
4. Data base systems
5. Software engineering and reliability
6. Document analysis
7. Networks and distributed computing
8. Geometric applications

The level of the examination is that of 600-level and 700-level courses in each area. A syllabus will be published well in advance of the exams listing the topics to be covered in each exam. Students are expected to take the comprehensive examination within two years of entering the Ph.D. program. All Ph.D. students are urged to take this examination as early as possible. Preference is given in the allocation of student financial support to those who have passed the comprehensive examination. The comprehensive examination may be attempted at most twice. Students who do not pass the comprehensive examination the first time must retake the examination at the next scheduled offering. Failure to pass the comprehensive examination after two attempts will normally lead to dismissal from the Ph.D. program.

After passing the comprehensive examination, a research topic of mutual interest to the student and his/her proposed committee is selected. At this point, the student formally begins his/her research study.

The Qualifying Examination

The qualifying examination is an oral examination designed to test the depth of the student's knowledge in his or her area of research specialization. It must be taken before either (a) two years after passing the comprehensive examination or (b) four years after entering the Ph.D. program. It generally focuses on his/her dissertation proposal. The main purpose of this exam is to evaluate the technical merits and feasibility of the student's proposal for his/her Ph.D. dissertation. The student's Ph.D. committee must conduct the examination. This committee consists of five faculty members of whom one must be from outside the school of computer science. The student's advisor is the chairperson of this committee. The faculty member from outside the school is selected by the Graduate College from three faculty members who are suggested by the student in consultation with his or her advisor.

The student must prepare a dissertation proposal before taking this examination. The student's advisor should have already approved this proposal. This proposal must be given to the Ph.D. committee members at least two weeks before the date of the qualifying exam. The proposal must contain a discussion of the background literature on the problem area, description of the specific topic of research proposal approach, feasibility arguments, the objective of the research project, and a list of references.

The student begins the exam with a presentation of the dissertation proposal. The remaining time is used for discussion and asking questions to determine if the student has sufficient depth of knowledge to carry out the proposed research. The examination cannot be taken more than twice. After successful completion of the qualifying examination, the student is advanced to candidacy for the doctoral degree.

Preparation of Dissertation

The candidate must prepare a dissertation on his or her research. The doctoral dissertation should represent a significant original research contribution to the field of computer science and be publishable in a recognized refereed journal.

Oral Defense

After completion of the dissertation, the candidate must pass a final oral defense of his/her dissertation. The candidate must make the final changes, if any, in the dissertation within three months from the date of the oral defense.

A candidate can defend the dissertation no more than twice. Each member of the committee must approve the final dissertation.

Satisfactory Progress

To maintain satisfactory progress in the Ph.D. program a student must:

1. Pass the comprehensive examination within 2.50 years of entering the Ph.D. program.

2. Maintain a minimum grade point average required by the College of Engineering.
3. Pass the qualifying examination within four years of entering the Ph.D. program.
4. Maintain satisfactory progress towards research.
5. Students who enter the Ph.D. program with a master's degree must complete all requirements for the Ph.D. degree within six years. Those who enter the Ph.D. program with a bachelor's degree must complete all requirements for the Ph.D. degree within eight years.

If these requirements are not met, the department may place the student on academic probation or drop him/her from the Ph.D. program.

Computer Science

CS 717

3 credits

Advanced Computer Simulation

Advanced discrete simulation modeling using SIMSCRIPT 11.5 and SLAM. Advanced continuous simulation using ACSL. Modeling concepts, measuring random phenomena. Passive objects, application of simulation to operating systems and software design in general. Digital-analog solution of linear differential equations, industrial dynamics. Feedback systems. Prerequisite: CS 617.

CS 718

3 credits

Theory of Computation

Computability of functions and sets in terms of Turing machines and other computational models. Universal Turing machines and examples of unsolvable problems. Introduction to other computational models, such as the lambda-calculus, Post systems, Markov algorithms and recursive function theory. The Church-Turing thesis and proofs of equivalence between the models. Prerequisite: CS 656.

CS 719

3 credits

Advanced Automata and Formal Languages

Extensive study of context-sensitive, recursive and recursively enumerable languages, including ambiguity and closure properties: decidable and undecidable properties of the different language classes: the halting problem and Post's correspondence problem; properties of the deterministic context-free languages; LR(k) and LL(k) grammars. Prerequisite: CS 656.

CS 733

Geographic Data Base Systems

3 credits

Spatial data types and operators: point queries, range queries, translation, rotation, and scaling. Data structures for object representation: arc tree, quadtrees. Commercial data bases vs. spatial data bases: relational, hierarchical, network. (May not be used to satisfy degree requirements in Computer Science.) Prerequisites: CS 135 or CS 117 or equivalent and STAT 611.

CS 740 **3 credits**
Statistical Pattern Recognition

Concepts and formal theoretical structures necessary for design and implementation of a pattern recognition system. Topics include: parametric and non-parametric methods, linear and non-linear classifiers and clustering algorithms. Prerequisites: STAT 667, MATH 253 or 265, and CS 302.

CS 741 **3 credits**
Structural Pattern Recognition

Survey of advanced pattern recognition techniques. Topics include: graph matching methods, syntactic approaches, neural nets, and context-dependent methods. Prerequisites: CS 656 and CS 677.

CS 742 **3 credits**
Document Image Understanding

Survey of document understanding methods and related topics that include: data compression, document exchange standards, layout analysis methods, logical analysis methods, OCR, error correction, and document routing. Prerequisites: CS 740 and CS 669.

CS 747 **3 credits**
Cryptography and Information Theory

Cryptography, cryptographic systems, encryption algorithms, cryptographic techniques, access control, lattice model of information flow, flow control mechanisms, inference control mechanisms, mechanisms restricting noise, mechanisms restricting statistics, statistical database models. Prerequisites: CS 370, STA 411.

CS 750 **3 credits**
Computational Algorithms in VLSI

Application and inherent limitations of using VLSI to implement computational algorithms, design and analysis of algorithms for design of VLSI circuits, introduction to VLSI implementation of computational algorithms represented by logic circuits, lower bounds on area and time, systolic arrays and their applications, VLSI layout algorithms, VLSI test generation and simulation. Prerequisite: CS 677.

CS 754 **3 credits**
Discrete Optimization

Network optimization problems, use of advanced data structures. Topics may vary and include maximum-flow algorithms, multiterminal maximum flows, minimum cost flows and circulations, matching algorithms, approximation algorithms, and applications. Hamiltonian circuits in dense graphs, disjoint paths, the postman problem, introduction to combinatorial geometry, and linear programming. Prerequisite: CS 677.

CS 756 **3 credits**
Formal Semantics

Coverage of formal methods for defining the semantics of programming languages, including the operational, denotation and axiomatic approaches. Proof techniques for verifying properties of programs. Consistent and complementary definitions for a Pascal-like language discussed. Prerequisites: CS 326 and CS 656.

CS 758 **3 credits**
Computational Geometry

Geometric searching, point location, range searching, convex hull, Graham's scan, gift wrapping, dynamic convex hull, proximity closest pair, Voronoi diagram, triangulation. Intersection, visibility shortest paths, geometry of rectangles. Prerequisite: CS 677.

CS 763 **3 credits**
Advanced Computer Architecture

Advanced study of various current computer architectures. Examples taken from specialized architectures that support modern general-purpose programming, operating systems, artificial intelligence and data bases. SIMD and MIMD parallel architectures. Prerequisites: CS 326 and CS 663.

CS 767 **3 credits**
Advanced Computer Graphics

Hidden line elimination algorithms and implementation. Perfect interpolators, cubic and bicubic splines, Kriging, Hermite surfaces, nonperfect interpolators, Bezier curves and surfaces, B-splines, ray tracing algorithms, shading, lightness, motion, moving pictures, two- and three-dimensional fractals. Special topics. Prerequisite: CS 680.

CS 768 **3 credits**
Surface Estimation for Computer-Aided Geometric Design

Affine maps, function spaces, the DeCasteljau algorithm, Bernstein polynomials, Bezier surfaces, nonparametric curves, Lagrange polynomials, C continuity, B-spline basis, Frenet frame, G continuity, gamma splines, beta splines, geometric continuity, tensor product interpolants, volume deformations, curvatures. Prerequisite: CS 767.

CS 769 **3 credits**
Advanced Data Base Management

Continuation of CS 632, including normalization of relational data bases using functional and multivalued dependencies. Query processing, query interpretation, query optimization, and methods for implementing and optimizing logic queries. Knowledge data bases, distributed data bases and object-oriented data bases. Prerequisite: CS 657.

CS 770 **3 credits**
Advanced Operating Systems

Study of the design principles, organization, and performance analysis of large-scale computer operating systems. Particular subjects emphasized include coordination of tasks, solutions of deadlock problems, theories of segmentation and paging, and performance prediction. Prerequisite: CS 370.

CS 771 **3 credits**
Concurrent Computation
Study of concurrent programming methods and applications; event spaces; models of concurrency, such as Petri nets, CCS and CSP. Synchronization, data sharing and communication. Concurrency constructs in various programming languages. Scheduling and implementation techniques. Applications of concurrency in operating system design, fault-tolerance, and reliability. Prerequisites: CS 326 and CS 370.

CS 772 **3 credits**
Software Architecture
Survey of advanced techniques for specifying and designing large software systems. System verification. Reliability and project management. Prerequisites: CS 370, CS 672, and CS 660, or consent of instructor.

CS 777 **3 credits**
Parallel Algorithms
Methods for creating and analyzing parallel algorithms. Parallel programming languages and programming models of shared-memory and distributed architectures. Measuring complexity of parallel algorithms. NC-class versus P-class algorithms. Prerequisite: CS 677.

CS 778 **3 credits**
Advanced Translation
Formal semantics, automatic compiler generation, attribute grammars. Language issues as they relate to compiler generation. Prerequisite: CS 660.

CS 779 **3 credits**
Supercompilers for Parallel and Vector Computers
Dependence analysis, Diophantine equations, the GCD test, the Banerjee test, do-loop normalization, concurrency in loops, vector code generation, control dependence and vectorization, parallel code generation for doall-loops, parallel code generation for doacross-loops, shared memory parallelization, parallelization for distributed memory architectures. Prerequisite: CS 778.

CS 780 **3 credits**
Distributed Computing and Algorithms
Methods and algorithms of distributed computing. Topics may include architecture and design goals, formal approaches to distributed computing problems, networks and protocols, models of distributed computing, synchronization and communication, synchronous and asynchronous systems, fault-tolerance and reliability, self-stabilization, distributed algorithms and applications. Prerequisites: CS 370, CS 677.

CS 781 **3 credits**
Automated Deduction
Use of computers for forming deductions and proving theorems in symbolic logic covered. Topics include resolution, unification, proof strategies, and equality. Also examines areas of application: problem solving, question answering, program verification, automatic programming and logic programming (Prolog). Prerequisite: CS 682.

CS 782 **3 credits**
Expert System Construction
Design, organization, and construction of expert systems. Includes general concepts, characteristics, elements, advantages, and examples of expert systems. Also rule-based knowledge representations, inference techniques, implementation tools and shells, and advanced topics. Prerequisite: CS 682.

CS 785 **3 credits**
Computational Linguistics
Introduction to linguistics and computational linguistics, for natural language. Phonology, morphology, syntax, semantics, and lexicology. Text analysis and processing; construction of lexicons, and indexes and concordances. Introduction to text retrieval, translation, speech understanding and generation. Prerequisite: CS 656.

CS 786 **3 credits**
Advanced Computational Linguistics
Advanced study of computational linguistics. Emphasis on cognitive methods in natural language understanding and generation. Pragmatics and discourse. Prerequisite: CS 785.

CS 789 **3 credits**
Topics in Advanced Computer Science
Graduate-level course in some field of computer science, at advanced level, depending upon the current interest of the staff and the students. May be repeated with a different subject matter to a maximum of nine credits. Prerequisite: Consent of instructor.

CS 790 **1-3 credits**
Master's Project
May be repeated, but only three credits will be applied to the student's program. S/F grading only. Prerequisite: Consent of instructor.

CS 791 **3-6 credits**
Thesis
May be repeated, but only six credits will be applied to the student's program. S/F grading only. Prerequisite: Consent of instructor.

CS 792 **1 credit**
Research Seminar
Oral presentation of assigned articles. May be repeated to a maximum of four credits. Prerequisite: Consent of instructor.

CS 799 **1-6 credits**
Dissertation Research
Research analysis and writing towards completion of dissertation and subsequent defense. May be repeated but no more than 18 credits will be allowed in the degree. S/F grading only. Prerequisites: Graduate standing in Ph.D. program and consent of advisor.

The following courses may also be used for graduate credit. For descriptions of 600-level courses, please consult the current *Undergraduate Catalog*, where they are listed as 400-level classes.

CS	617	Introduction to Computer Simulation
CS	641	Advanced Internet Programming
CS	641L	Advanced Internet Programming Lab
CS	645	Internet Security
CS	651	Multimedia Systems Design
CS	651L	Multimedia Systems Design Lab
CS	656	Automata and Formal Languages
CS	657	Database Management Systems
CS	660	Compiler Construction
CS	663	Computer Architecture
CS	665	Computer Networks
CS	669	Introduction to Digital Image Processing
CS	671	Program Derivation
CS	672	Software Product Design and Development I
CS	673	Software Product Design II
CS	674	Decision Environments for Software Product Development
CS	677	Analysis of Algorithms
CS	680	Computer Graphics
CS	682	Artificial Intelligence
CS	689	Advanced Computer Science Topics
CS	690	Independent Study

Electrical and Computer Engineering

Chair

Venkat, Rama (1989), Professor; B.Tech., Indian Institute of Technology; M.S., Ph.D., Purdue University.

Graduate Coordinator

Schill, Robert A. (1993), Associate Professor; B.S.E.E., Milwaukee School of Engineering; M.S.E.E., Ph.D., University of Wisconsin-Madison.

Graduate Faculty

- Baghzouz, Yahia (1987), Professor; B.S., M.S., Ph.D., Louisiana State University.
- Das, Biswajit (2003), Associate Professor; B.S.E.E., Indian Institute of Technology, Kharagpur; M.S.E.E., Southern Illinois University, Ph.D., Purdue University.
- Jiang, Yingtao (2000), Assistant Professor, B.E., Chongqing University; M.S.E.C.E., Concordia University Montreal; Ph.D., University of Texas, Dallas.
- Latifi, Shahram (1989), Professor; B.S., M.S., Teheran University; M.S., Ph.D., Louisiana State University.
- McGaugh, Eugene E. (1989), Associate Professor; B.S., University of Kansas; M.S., University of Missouri; Ph.D., University of Kansas.
- Muthukumar, Venkatesan (2000), Assistant Professor; B.S.E.E., Anna University India; M.S.E.E., Ph.D., Monash University, Australia.
- Regentova, Emma (2000), Assistant Professor; M.S.C.E., Ph.D., State Engineering University of Armenia.
- Saberinia, Ebrahim (2004), Assistant Professor; B.S.E.E., M.S.E.E., Sharif University of Technology; Ph.D., University of Minnesota.
- Selvaraj, Henry (1999), Assistant Professor; M.S., Ph.D., Warsaw University of Technology.
- Singh, Sahjendra N. (1986), Professor; B.S., Patna University; M.E., Indian Institute of Science; Ph.D., The Johns Hopkins University.
- Stubberud, Peter (1991), Associate Professor; B.S., M.S., Ph.D., University of California, Los Angeles.
- Yang, Mei (2004), Assistant Professor; B.E.C.E., M.E.C.E., University of Electronic Science and Technology of China; Ph.D., University of Texas, Dallas.

Professors Emeriti

- Brogan, William L. (1990-1998), Emeritus Professor; B.S.M.E., State University of Iowa; M.S., Ph.D., University of California, Los Angeles.
- Martinez, Ramon (1971-2004), Emeritus Professor; M.S.E.E., Worcester Polytechnic Institute.
- Tryon, John G. (1975-1986) Emeritus Professor; B.Phys., University of Minnesota; Ph.D., Cornell University.

Electrical engineering is the application of scientific and mathematical principles to the design, manufacture, and control of structures, machines, processes, and systems. In the past, the work of electrical engineers has had a direct and vital impact on people's lives. For example, electrical engineers have been responsible for the creation of electric power, modern electronics, computers, electronic communication systems, modern flight controllers, automated manufacturing and medical diagnostic tools. An

electrical engineering education continues to provide opportunities for solving problems of great social significance and for increasing people's quality of life. The Department of Electrical and Computer Engineering at UNLV has excellent facilities for graduate education and research in electrical engineering. In addition, our faculty are experienced and knowledgeable in many of the electrical engineering disciplines, including communications, computer engineering, control system theory, electromagnetics and optics, electronics, power systems, signal processing and solid state devices. At UNLV, students have the opportunity for personal interaction so that programs and research projects can be tailored to student interests.

The Department of Electrical and Computer Engineering offers a wide array of high-technology computing and research facilities. Through the department, as well as the college, graduate students have access to a large network of personal computers and scientific workstations. These include a number of high-performance Sparc stations, Silicon Graphics workstations, Windows-based personal computers, and Apple Macintosh computers. Available software includes layout tools, logic synthesis tools, processing and demo modeling tools, signal and image processing tools, and microwave design tools. Further, graduate students have access to Cray YMP 2/216 and Convex C220 supercomputers. The department's high-technology research equipment includes a C-V profiler, Hall mobility measurement system, diffusion furnace, vacuum evaporative system, pulsed power systems, precision power analyzer, state-of-the-art test and measurement equipment including spectrum and network analyzers and digital scanners.

Master of Science in Electrical Engineering

Applications are considered on an individual basis. Candidates can be admitted on a regular or provisional status. Qualified applicants who are not admitted on either status can take graduate courses as a nondegree student but not completing all of the M.S.E.E. degree requirements. Only 15 credits taken as a UNLV nondegree student will count for an M.S.E.E. degree.

To be considered for admission to the M.S.E. program, an applicant must:

1. Have a Bachelor of Science (B.S.) degree in electrical engineering, computer engineering or a closely related discipline. (Applicants who possess a bachelor's degree in a closely related discipline, such as physics or mathematics, may be admitted on provisional status. These students will be required to complete certain undergraduate courses before they can attain regular status. The graduate committee determines these courses on an individual basis. Graduates with degrees in engineering technology ordinarily have an inadequate background to be admitted to the graduate program.)
2. Have a minimum grade point average (GPA) of 3.00 (A=4.00) for their bachelor's degree. (Applicants who have an overall GPA below 3.00 must submit Graduate

Record Examination (GRE) scores to the department. These applicants may be admitted subject to the discretion of the Electrical and Computer Engineering Graduate Committee. Applicants who want to be considered for an assistantship, or who feel that their GRE scores will enhance their chances for admission, are strongly encouraged to submit GRE scores.)

3. Submit GRE scores if the applicant did not obtain his bachelor's degree from an ABET accredited institution. (An applicant possessing a bachelor's degree from an ABET accredited institution is not required to submit GRE scores.)
4. Submit a completed application form and official transcripts of all college-level work to the Graduate College. In addition, submit a *one* page written statement of purpose indicating the applicant's research interests, motivations and objectives, three dated letters of recommendation concerning the applicant's potential for succeeding in the graduate program *and* an additional set of transcripts of all college-level work directly to the Department of Electrical and Computer Engineering.
5. For international applicants to be considered for admission, the Graduate College requires that they take the Test of English as a Foreign Language (TOEFL) and obtain a minimum score of 550. Students whose first language is not English may be required to take the English as a Second Language Placement Test upon arrival at UNLV. If necessary, they will be required to take English as a Second Language (ESL) courses at UNLV. These courses will not count towards their graduate degree.

M.S.E. E. Degree Requirements

All M.S.E.E. candidates must maintain an overall minimum grade point average (GPA) of 3.00 (B) and a minimum GPA of 3.00 (B) each semester. Students who do not maintain an overall GPA of 3.00 (B) and a GPA of 3.00 (B) each semester will either be placed on probation or expelled from the program. The Electrical and Computer Engineering Graduate committee and the Graduate College will determine the terms of the student's probation in accordance with the Graduate College and department policy.

All regular status graduate students must file an approved program before the completion of their second semester. The student's advisor, the graduate coordinator, and the Graduate College Dean must approve this program. All regular and provisional status graduate students must show satisfactory progress towards completion of their degree by completing at least six credits of their approved program per calendar year. If progress towards their degree program is not satisfactory, students will either be placed on probation or expelled from the program.

Specific requirements for the M.S.E.E. degree are:

1. Satisfy the M.S.E.E. degree program admission requirements and be admitted to the M.S.E.E. program on a regular status.

2. Complete a minimum of 30 credits of graduate-level courses with an overall minimum GPA of 3.00 (B) and a minimum GPA of 2.70 (B-) in each class applied towards the 30 credits. Grades below B- are not counted towards the M.S.E.E. degree and must be repeated or replaced. Continued enrollment of a student who earns more than one grade below B- is contingent upon the approval of the committee.

Thesis Option: A total of 30 credits is required for the Thesis Option. Of the 30 required credits, a minimum of 18 credits must be in electrical engineering courses, a minimum of 15 credits must be excluding ECG 796 and ECG 797, and no more than three credits may be from ECG 791 Graduate Independent Study. Students opting for the Thesis Option must complete at least six credits of ECG 797 (Electrical Engineering Thesis). Although ECG 797 can be taken repeatedly, no more than six credits can be applied towards the M.S.E.E. degree.

Course Only Option: A total of 33 credits is required for the Course Only Option. Of the 33 required credits, a minimum of 18 credits must be in electrical engineering courses, a minimum of 15 credits must be in 700-level electrical engineering courses and no more than three credits may be from ECG 791 (Graduate Independent Study). The Course Only Option is a terminal degree.

3. Successfully complete a minimum of three credits in at least three of the following areas:
 - a. Computer Engineering
 - b. Communications
 - c. Control Systems
 - d. Electromagnetics and Optics
 - e. Electronics
 - f. Power Systems
 - g. Signal Processing
 - h. Solid State Electronics, Materials and Devices

4. **Thesis Option Only:** Complete a thesis. Before beginning a thesis, students must have their thesis topic approved by their advisor, and the necessary paper work must be filed with the Graduate College. The student must complete a thesis containing original research and defend it before his/her advisory committee at the Thesis Exam. The student can receive no more than six credits of ECG 797 (Electrical Engineering Thesis) for the work associated with the thesis. Students who plan to continue their studies beyond the M.S.E.E. degree program are strongly encouraged to select this option.

Thesis Exam: Prior to the student's defense of the thesis before his/her advisory committee, the student must submit a complete copy of the thesis to each member of his/her advisory committee of the date, time and location of the oral defense of the thesis or project at least two weeks in advance.

Time Limits

The Department of Electrical and Computer Engineering requires that the M.S.E.E. degree be finished within a period of six years. Courses taken more than six years prior to graduation may not be applied toward the M.S.E.E. degree.

No Risk Ph.D. Pre-Qualifying Exams

A full graduate standing master's degree candidate who is interested in pursuing a doctoral degree may be allowed to take the Ph.D. qualifying exam without penalty during his/her period as an M.S. student. The exam may be taken as many times as desired but no more than once a semester. Those areas that the student passes will count towards his/her qualifying exam requirement upon entering the Ph.D. program. The candidate must complete an M.S. degree in the Electrical and Computer Engineering department. Once the student receives an M.S. degree in Electrical Engineering, the student must abide by the requirements outlined in the Ph.D. program. This option is not available to nondegree students.

Doctor of Philosophy in Electrical Engineering

The Department of Electrical and Computer Engineering at UNLV offers a program leading to the Ph.D. degree in Engineering in the field of Electrical Engineering. Specific major areas of study currently available include: Communications, Computer Engineering, Control System Theory, Electromagnetics and Optics, Power Systems, Signal Processing, and Solid State Materials and Devices.

Admission Requirement - Doctoral Degree Program

Applicants are considered on an individual basis. One may be admitted to the Ph.D. program by one of two mechanisms. The Conventional Ph.D. Option requires the student to complete an M.S. degree in Electrical and Computer Engineering. The Direct Ph.D. Option allows those undergraduates with outstanding undergraduate backgrounds to enter the Ph.D. program without having to complete an M.S. degree in Electrical and Computer Engineering. All requirements leading to a Ph.D. are still required beyond the B.S. degree in Electrical and Computer Engineering excluding the completion of a master's thesis.

Conventional Ph.D. Option

Applications are considered on an individual basis. Candidates can be admitted on a regular or provisional status. Qualified applicants who are not admitted can take a few graduate courses as a nondegree student not completing all of the Ph.D. requirements. Only 15 credits taken as a graduate nonadmitted student can count toward the degree.

To be considered for admission to the Ph.D. program, an applicant must:

1. Have a Master of Science (M.S.) degree in electrical engineering or computer engineering;
2. Have a minimum overall grade point average (GPA) of 3.20 (A=4.00) for their master's degree;
3. Submit GRE scores to the department and have obtained the following minimum scores:

Section	% Below
Verbal	50
Quantitative	75

4. Submit a completed application form and official transcripts of all college-level work to the Graduate College. In addition, submit a **one** page written statement of purpose indicating the applicant's research interests, motivations and objectives, three dated letters of recommendation concerning the applicant's potential for succeeding in the graduate program *and* an additional set of transcripts of all college-level work directly to the Department of Electrical and Computer Engineering.

Direct Ph.D. Option

Applications are considered on an individual basis. To be considered for admission to the Ph.D. Program, an applicant must:

1. Have a minimum overall grade point average (GPA) of 3.50 (A=4.00) for their bachelor's degree;
2. Submit GRE scores to the department and have obtained the following minimum scores:

Section	% Below
Verbal	50
Quantitative	75

3. Submit a completed application form, a written statement of purpose indicating the applicant's interests and objectives, three letters of recommendation concerning their potential for succeeding in the Ph.D. program, and official transcripts of all college-level work to the Graduate College.
4. Submit a completed application form and official transcripts of all college-level work to the Graduate College. In addition, submit a **one** page written statement of purpose indicating the applicant's research interests, motivations and objectives, three dated letters of recommendation concerning the applicant's potential for succeeding in the graduate program *and* an additional set of transcripts of all college-level work directly to the Department of Electrical and Computer Engineering.

International Applicants

Before international applicants can be considered for admission, the Graduate College requires that all international applicants take the Test of English as a Foreign Language (TOEFL) and obtain a minimum score of 550. Student's whose first language is not English may be required to take the English as a Second language Placement Test upon arrival at UNLV. If necessary, they will be required to take English as a Second Language (ESL) courses at UNLV. These courses will not count toward their graduate degree.

Ph.D. Degree Requirements

All Ph.D. candidates must maintain a minimum overall grade point average (GPA) of 3.20 and a minimum GPA of 3.20 each semester. Ph.D. candidates who do not maintain an overall GPA of 3.20 and a GPA of 3.20 each semester will either be placed on probation or expelled from the program. The Electrical and Computer Engineering Graduate Committee and/or the Graduate College will

determine the terms of the student's probation in accordance with the rules of the Graduate College.

All regular status graduate students must file an approved program before the completion of their first semester. This program must be approved by the student's advisor and the graduate coordinator. All regular and provisional status graduate students must show satisfactory progress towards completion of their degree by completing at least six credits of their approved program per calendar year. If their progress towards their degree program is not satisfactory, students will either be put on probation or expelled from the program.

Consecutive order of specific requirements for both the Direct and the Conventional Ph.D. options are:

- 1) Satisfy the Ph.D. degree program admission requirements and be admitted to the Ph.D. program on a regular status.
- 2) Pass the Qualifying Exam within two semesters of being admitted to the Ph.D. program on a regular status. The Qualifying Exam is offered once every Fall semester and once every Spring semester. This exam cannot be taken more than twice. The Qualifying Exam is described in Section 4.3 of the Graduate Program Document.
- 3) During the first semester, a Ph.D. student must select a faculty advisor. The faculty advisor does not have to be the one to whom the student was assigned upon entering the Ph.D. program. In coordination with the faculty advisor, the student must also form a doctoral advisory committee. A doctoral advisory committee is composed of at least five members of the UNLV Graduate Faculty. Three of these faculty members must be from the Department of Electrical and Computer Engineering, the fourth from a relevant supporting field, and the fifth is appointed by the Graduate College.
- 4) Beyond the M.S. degree, a Ph.D. student must complete a minimum of 27 credits of graduate-level courses with an overall minimum GPA of 3.20 and a minimum GPA of 2.70 (B-) in each class applied towards the 27 credits. Candidates in the Direct Ph.D. program must complete a minimum of 51 (24 M.S. + 27 Ph.D.) required credits. Grades below B- are not counted towards the Ph.D. degree and must be repeated or replaced.

Conventional Ph.D. Option

Continued enrollment of a student who earns more than one grade below B- is contingent upon the approval of the graduate committee. Of the 27 required credits, a minimum of 18 credits must be in 700-level courses, and no more than three credits may be from ECG 791 (Graduate Independent Study). The student's doctoral advisory committee may add more requirements in accordance with the individual's background and field of study.

Direct Ph.D. Option

Continued enrollment of a student who earns more than one grade below B- is contingent upon the approval of the graduate committee. Of the 51 required credits, a minimum of 33 credits must be in 700-level

courses, and no more than six credits may be from ECG 791 (Graduate Independent Study). The student's doctoral advisory committee may add more requirements in accordance with the individual's background and field of study.

- 5) Beyond the bachelor's degree, a Ph.D. student must complete a minimum of 15 credits in an approved major field, nine credits in each of the two approved minor fields. A minimum GPA of 3.33 (B+=3.30) must be obtained in each of the minor fields. Approved major and minor fields are described in detail in Section 4.8 of the Graduate Program Document.
- 6) After passing the Qualifying Exam, successfully completing all courses for a major field, and successfully completing all courses for the minor fields, students are eligible to take the Comprehensive Exam. All students must have passed the Comprehensive Exam within two semesters after successfully completing all required course work except for the 18 credits of ECG 799 (Dissertation). NOTE: Up to six credits of ECG 799 taken prior to the successful completion of the Preliminary Exam may count toward the degree program. The Comprehensive Exam cannot be taken more than once per semester and cannot be taken more than twice. The Comprehensive Exam is described in detail in Section 4.4 of the Graduate Program Document.
- 7) After successfully completing all required course work and passing the Comprehensive Exam, the students must pass the Preliminary Exam. The Preliminary Exam cannot be taken more than once per semester but may be repeated until passed. The Preliminary Exam is described in detail in Section 4.5 of the Graduate Program Document.
- 8) Complete a minimum of 18 credits of ECG 799 and complete a dissertation containing original research. Upon completion, the student must pass the Final Exam in which the student defends his/her dissertation. The Final Exam is described in detail in Section 4.6 of the Graduate Program Document.

Ph.D. Major and Minor Fields

Beyond the bachelor's degree, a Ph.D. student must complete a minimum of 15 credits in a major field, nine credits in a minor field of a single area in Electrical and Computer Engineering, and another nine credits in a second minor field. Currently, the Department of Electrical and Computer Engineering at UNLV offers Communications, Computer Engineering, Control System Theory, Electromagnetics and Optics, Electronics, Power Systems, Signal Processing, and Solid State Materials and Devices as major fields. Specific courses that can be applied to specific fields are listed in detail later in this section of the manual.

Each student must complete two minor fields. To complete a minor field, a student must complete a minimum of nine credits in an approved minor field and have an overall minimum GPA of 3.33 (B+=3.30) for the nine minor field credits. Of the nine required credits in each minor field, a minimum of six credits must be in 700-level courses.

Specific courses that can be applied to specific minor fields are listed in detail in this section of the manual. Some courses may be listed under two different fields. Such a course can be applied to only one field. With the written approval of the major advisor and the student's advisory committee, a mixed minor field may be formed with courses inside and/or outside of the Electrical Engineering department's approved fields (e.g., a mixed minor in mathematics and physics, a mixed minor in computer engineering and computer science, a physics minor, a mechanical engineering minor, solid state and electromagnetics mixed minor, etc.). A mixed minor may not be composed of courses in the Electrical Engineering Department that satisfy course work in the major and other minor field. The only exception is when a course may be used in more than one field. In this case, the course may not be counted twice but may be used for either minor area. However, the student must complete at least one minor field in Electrical Engineering in a single area. Refer to the department's Graduate Program Handout regarding specific courses that can be applied to specific minor fields.

International Applicants

For international applicants to be considered for admission, the Graduate College requires they take the Test of English as a Foreign Language (TOEFL) and obtain a minimum score of 550 or 85 on the Michigan Test. Student's whose first language is not English may be required to take the English as a Second Language Placement Test upon arrival at UNLV. If necessary, they will be required to take English as a Second Language (ESL) courses at UNLV. These courses will not count toward their graduate degree.

Graduate Teaching Assistantships

The Department of Electrical and Computer Engineering has a limited number of Teaching Assistantships that are awarded to superior students. To be considered for a teaching assistantship, a student must submit Graduate Record Examination (GRE) scores to the Department of Electrical and Computer Engineering. Prospective students should contact the department's Graduate Coordinator for additional information and refer to the Graduate Catalog for submission deadlines.

Teaching Assistants perform an average of 20 hours per week of teaching related service and are required to complete a minimum of six credit hours per semester. Teaching Assistants who are also working toward the M.S.E.E. degree must take the Thesis Option. Teaching Assistants who do not adhere to these requirements, do not perform their teaching duties satisfactorily, or do not maintain the minimum GPA requirements specified by their degree programs can lose their assistantships and/or will be placed on probation. The Electrical and Computer Engineering Graduate Committee will determine the terms of the student's probation. International Teaching Assistants are required to receive a passing score (50 out of 60 points) on the Test of Spoken English (TSE) prior to assuming any type of instructional duties.

Electrical and Computing Engineering

ECG 700 3 credits

Advanced Computer System Architecture

High performance computer architecture including pipelining techniques, high speed memory systems, vector processors, parallel processing, and interconnection networks. Prerequisite: ECG 300 or consent of instructor.

ECG 701 3 credits

Reliable Design of Digital Systems

D-algorithm, Boolean difference, test generation for combinational and sequential circuits, self checking circuits, fault tolerant design, design for testability, and topics in reliability and maintainability. Prerequisite: ECG 300 or consent of instructor.

ECG 702 3 credits

Interconnection Networks for Parallel Processing Applications

Interconnection networks models, comparison of single-stage networks: PM2I, HYPERCUBE Illiac and suffle-exchange, partitioning single-state networks, multistage networks, survey and comparison of fault-tolerant multistage networks. Prerequisite: ECG 300 or consent of instructor.

ECG 703 3 credits

Advanced Digital Logic

Sets, relations, and lattices. Switching algebra and its applications, functional decomposition and symmetric functions, Turing machine, finite state recognizer. Prerequisite: ECG 100.

ECG 704 3 credits

Coding with Applications in Computers and Communication Media

Error correcting codes, design and analysis of encoder/decoder circuitry, applications to reliable communication and fault tolerant computing, compression encoding schemes. Prerequisites: ECG 300, MAT 453, or consent of instructor.

ECG 705 3 credits

Fault-Tolerant Computing

Fault-tolerant design of digital systems. Static, dynamic, hybrid, self-purging redundancies. Error-correcting codes and system diagnosis. Fault-tolerance in multiprocessor and VLSI based-systems, including token BUS, shared memory interconnections, and tree, binary cube and loop networks. Examples of practical fault-tolerant systems. Prerequisites: ECG 300.

ECG 706 3 credits

Analysis of Telecommunication and Data Networks

Probability-based treatment of telecommunication and data networks. Delay, throughput, buffer management in layers of ISO Open Systems Interconnection Model. Performance analysis, flow and congestion control, routing function, polling and random access, CSMA/CD and Ethernet. Prerequisites: ECG 300 and MAT 462.

ECG 707 3 credits

Logic Synthesis Engineering

Theory and application of Boolean Minimization, functional decomposition and logic synthesis for FPGAs, serial and parallel decomposition strategies, and design implementation using FPGAs. Design entry, introduction to VHDL, BDD, FSM, and BLIF. Placement and routing in Xilinx and Aleira. Prerequisites: Graduate standing in computer engineering or consent of instructor.

ECG 720 3 credits

Electronic Design with Integrated Circuits

Designing electronics systems using linear and digital integrated circuits. Topics include operational amplifiers, linear and nonlinear applications, waveform generation, low noise circuits, active filters, digital ICs. A/D conversion, grounding and shielding, and system design. Intended for electrical and electronic students. Prerequisites: ECG 421, ECG 420 and consent of instructor.

ECG 721 3 credits

Low Noise Electronics

Noise mechanisms in semiconductor devices, noise calculations, low noise designs, high gain multistage amplifiers, matched filters, shielding. Prerequisite: Graduate standing or consent of instructor.

ECG 730 3 credits

Advanced Engineering Electromagnetics I

Conformal transformation with application to static field problems in engineering; wave harmonics with engineering applications; theorems of waves and media; Special Theory of Relativity with engineering applications; wave propagation in various media; engineering application of scattering. Prerequisite: ECG 330 or consent of instructor.

ECG 731 3 credits

Theoretical Techniques in Electromagnetics

Review and introduce mathematical techniques basic to the study of engineering electromagnetics, including coupled mode theory; complex analysis; and Green's function. Prerequisite: ECG 330 or consent of instructor.

ECG 732 3 credits

Advanced Engineering Electromagnetics II

Scattering; particle and beam radiation; selected topics in advanced antenna and microwave engineering. Prerequisites: ECG 330 or consent of instructor.

ECG 733 3 credits

Plasma I

Single particle motion; adiabatic invariants; plasmas as fluids; waves in plasmas; diffusion; resistivity; introduction to kinetic theory; Landau damping. Prerequisites: ECG 330.

ECG 740 **3 credits**

Computer Analysis Methods for Power Systems

Power system matrices, programming considerations, conventional power flow studies, approximate and fast power flow studies, optimal dispatch, fault studies, power system stability, stochastic methods in power systems analysis. Prerequisites: ECG 440, ECG 440L or consent of instructor.

ECG 741 **3 credits**

Electric Power Distribution System Engineering

Electric load characteristics, distribution transformers, design of subtransmission lines and distribution substations, design of primary and secondary systems, voltage drop and power loss calculation, capacitor applications, voltage regulation, distribution system protection and reliability. Prerequisites: ECG 440, ECG 440L or consent of instructor.

ECG 742 **3 credits**

Power System Stability and Control

Power equipment dynamic characteristics and modeling, control of active and reactive power, small-signal stability, transient stability, voltage stability, sub-synchronous oscillations, mid- and long-term stability, methods of improving stability. Prerequisites: ECG 440, ECG 440L or consent of instructor.

ECG 750 **3 credits**

Optical Electronics I

Propagation of rays and beams, optical beams in fibers, resonators, laser oscillation, electro-optic, modulation, laser systems. Prerequisites: MAT 430, ECG 330, ECG 452 or consent of instructor.

ECG 751 **3 credits**

Optical Electronics II

Detection of optical radiation, optical dielectric waveguides, semiconductor lasers, phase conjugate optics, laser applications including holography. Prerequisite: ECG 750.

ECG 752 **3 credits**

Physical Electronics

Quantum Theory, electron in potential well, harmonic oscillator. Hydrogen atom, Band Theory of Solids, Kronig-Penny model, theory of metallic state, diffraction by crystals, electronic structure of solids. Prerequisites: ECG 320 or consent of instructor.

ECG 753 **3 credits**

Advanced Topics in Semiconductor Devices I

Topics of current interest in solid state electronic devices: physics of semiconductors, thermal and optical and electronic properties of semiconductors, bipolar junction devices, field effect devices, surface related effects, optoelectronic devices, semiconductor lasers. Applications and the design of circuits using these devices. Intended for electrical and electronic engineers, physicists and qualified senior students in engineering and physics. Prerequisites: PHY 411 and 483 or ECG 421, ECG 420 and consent of instructor.

ECG 754 **3 credits**

Hybrid Microelectronics

Vacuum theory, thin and thick film fabrication, electron transport phenomena, electronic properties active and passive films, distributed networks, designing hybrid microcircuits. Prerequisite: Graduate standing or consent of instructor.

ECG 755 **3 credits**

Monolithic Integrated Circuit Fabrication

Fabrication of integrated silicon and gas circuits, thermal oxidation, solid state diffusion, epitaxial growth, ion implantation, photo and electron lithography, design considerations, surface effect. Prerequisite: Graduate standing or consent of instructor.

ECG 756 **3 credits**

Advanced Topics in Semiconductor Devices II

Topics of current interest in solid state electronic devices: ultrafast electronics, high electron mobility transistors, superlattices, heteroface devices, transfer electron devices and III-V and II-VI compounds, novel device structures. Novel approaches to device modeling such as Monte Carlo simulations, self-consistent solution of Schroedinger and Poisson and other approaches. Prerequisite: ECG 753.

ECG 757 **3 credits**

Electron Transport Phenomena in Solid State Devices

Phenomenological transport equations, Boltzmann transport equation, relaxation time approximation, low field and high electron transport in Si and GaAs, moments of BTE, Monte Carlo simulation, spatial and temporal transients, device analysis, Quantum transport. Prerequisite: ECG 450 or ECG 753.

ECG 758 **3 credits**

Numerical Methods in Engineering

Computational course with emphasis on both the numerical analysis and the programming aspects of computer-aided design using simulation methods. Coverage includes understanding and use of CAD programs such as ECAP, CIRCUS, ICECREM, SUPREM, etc. Prerequisite: Graduate standing or consent of instructor.

ECG 760 **3 credits**

Random Processes in Engineering Problems

Basic probability theory, random variables, probability and densities, expectation, static estimation, random processes, power spectral density, mean square calculus, Wiener integrals. Prerequisites: ECG 460, MAT 461 or consent of instructor.

ECG 761 **3 credits**

Spectral Analysis and Time Series

Stationary random processes. Spectral representation. Estimation of correlation functions and spectra. Higher order spectra and nonlinear system models. Prerequisites: ECG 460, ECG 760 or consent of instructor.

ECG 762 **3 credits**
Detection and Estimation of Signals in Noise
Hypothesis testing, matched filters, estimation theory, Kalman and Wiener filters, applications to communication systems. Prerequisites: ECG 460, ECG 760 or consent of instructor.

ECG 770 **3 credits**
Linear Systems Theory
Mathematical systems theory, state space concepts, canonical forms, time and frequency domains, controllability and observability, state feedback, compensator design, and algebraic systems theory. Prerequisites: ECG 470, MAT 429 or consent of instructor.

ECG 771 **3 credits**
Optimal and Modern Controls
Review of analysis of linear control systems, optimal control systems, time and frequency domains, regulator problems, deterministic and random processes. Topics selected according to the interests of the class. Prerequisite: ECG 770.

ECG 772 **3 credits**
Nonlinear Systems I
Introduction, differential equations, approximate analysis methods, Lyapunov stability, input-output stability. Prerequisite: ECG 770 or consent of instructor.

ECG 773 **3 credits**
Multivariable Control
Mathematical preliminaries, frequency domain representation, differential operator representation, linear state feedback, frequency domain compensation, fractional approaches, recent topics in control. Prerequisite: ECG 770 or consent of instructor.

ECG 774 **3 credits**
Stochastic Control
Introduction, stochastic processor, state estimation, Kalman Filter, nonlinear estimation, stochastic control. Prerequisite: ECG 770 or consent of instructor.

ECG 775 **3 credits**
Nonlinear Systems II
Geometric approach to nonlinear systems, inversion of input-output map, decomposition, noninteraction, disturbance decoupling, exact linearization, nonlinear control synthesis, Volterra series, realization theory. Prerequisite: ECG 772 or consent of instructor.

ECG 776 **3 credits**
Adaptive Control
Introduction, model reference control, hyperstability, Popov criterion, parameter identification, adaptive control of discrete systems, adaptive predictor, adaptive state estimation. Prerequisite: ECG 770 (formerly EEG 760) or consent of instructor.

ECG 777 **3 credits**
Robotic Systems Control
Dynamics of rigid and elastic robotic systems, trajectory planning, inverse torque computation, adaptive control, variable structure control, torque and force feedback control. Prerequisite: Consent of instructor.

ECG 780 **3 credits**
Digital Signal Processing
Introduction to the theory and applications of digital signal processing. Discrete-time signals, linear systems and difference equations. Sampling and multirate systems. One sided and two sided z-transforms. Finite impulse response (FIR) and infinite impulse response (IIR) systems. The discrete and fast Fourier transforms (FFT). Prerequisite: ECG 460, MAT 429 or consent of instructor.

ECG 781 **3 credits**
Digital Filters
Theory and applications of digital filters. Structures for discrete time systems. Finite precision numerical effects in digital systems. Finite impulse response (FIR) and infinite impulse response (IIR) digital filters designs including windowing techniques, optimization techniques, analog to discrete time transformation techniques and wave digital filters. Prerequisite: ECG 780.

ECG 782 **3 credits**
Multidimensional Digital Signal Processing
Theory and applications of multidimensional (M-D) digital signal processing. M-D signals and systems. M-D z-transform. M-D DFT and FFT. Design and implementation of M-D FIR and IIR filters. Applications to image processing such as image enhancement and restoration. Advanced topics chosen according to class interests. Prerequisite: ECG 780.

ECG 783 **3 credits**
Adaptive Signal Processing with Neural Networks
Theory and application of adaptive signal processing with neural networks. Theory of adaptation and performance surfaces. Adaptive algorithms. Fundamental concepts and models of artificial neural systems. Single layer perception classifiers. Multi layer feed forward networks. Single layer feedback networks applications. Prerequisite: ECG 780 or equivalent.

ECG 791 **1-3 credits**
Independent Study in Electrical Engineering
Supervised independent work in a topic of electrical engineering. May be repeated to a maximum of six credits with consent of electrical engineering faculty. Prerequisites: Graduate standing in electrical engineering or related field and consent of instructor.

ECG 795**1-3 credits****Advanced Special Topics in Electrical Engineering**

Advanced special topics in modern electrical engineering as defined in the announcement of the course. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in electrical engineering or related field and consent of instructor.

ECG 796**1-3 credits****Electrical Engineering Project**

Advanced project in electrical engineering. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in electrical engineering or related field and consent of instructor.

ECG 797**3-6 credits****Electrical Engineering Thesis**

May be repeated, but only six credits will be applied to a student's program. S/F grading only. Prerequisite: Graduate standing in electrical engineering or related field and consent of instructor.

ECG 799**1-6 credits****Dissertation**

Research analysis and writing toward completion of dissertation and subsequent defense. May be repeated to a maximum of 18 credits allowed toward the degree. S/F grading only. Prerequisites: Graduate standing in electrical engineering or related field and consent of instructor.

The following 600-level courses have been approved by the Graduate College for possible inclusion in graduate programs. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

ECG 600	Computer Communication Networks
ECG 605	Data Compression Systems
ECG 604	Computer Interfacing
ECG 610	Hardware Description Language: VHDL
ECG 615	Introduction to VLSI System Design
ECG 622	Introduction to Analog Integrated Circuit Design
ECG 630	Transmission Lines
ECG 631	Engineering Optics
ECG 632	Antenna Engineering
ECG 633	Active and Passive Microwave Engineering
ECG 642	Power Electronics
ECG 650L	Solid State Characterization Laboratory
ECG 651	Electronic and Magnetic Materials and Devices
ECG 652	Optoelectronics
ECG 653	Introduction to Nanotechnology
ECG 662	Advanced Digital Communications
ECG 672	Digital Control Systems
ECG 674	Recent Topics in Control
ECG 680	Discrete-Time Signal Processing
ECG 680L	Digital Signal Processing Laboratory
ECG 682	Introduction to Biomedical Signals and Systems
ECG 695	Special Topics

Mechanical Engineering

Chair

Trabia, Mohamed (1987), Professor; B.S., M.S., Alexandria University; Ph.D., Arizona State University.

Graduate Coordinator

Yim, Woosoon (1987), Professor; B.S., Hanyang University; M.S., Ph.D., University of Wisconsin-Madison.

Graduate Faculty

- Boehm, Robert F. (1990), Professor; B.S., M.S., Washington State University; Ph.D., University of California, Berkeley; P.E., California.
- Chen, Yi-Tung (1993), Associate Professor; B.S., Feng Chia University; M.S., Ph.D., University of Utah.
- Culbreth, William G. (1985), Associate Professor; B.S., California State Polytechnic University, Pomona; M.S., Ph.D., University of California, Santa Barbara.
- Mauer, Georg F. (1986), Professor; Diploma-Ingenieur; Ph.D., Technical University of Berlin.
- Moujaes, Samir F. (1984), Associate Professor; B.S., M.S., American University of Beirut; Ph.D., University of Pittsburgh; P.E., Nevada.
- O'Toole, Brendan J. (1992), Associate Professor; B.S., M.S., Ph.D., University of Delaware.
- Pepper, Darrell W. (1992), Professor; B.S., M.S., Ph.D., University of Missouri-Rolla.
- Reynolds, Douglas D. (1983), Professor; B.S., Michigan State University; M.S., Ph.D., Purdue University.
- Rice, Stephen (1996), Associate Vice President for Research & Economic Development; B.S., M.Eng., Ph.D., University of California, Berkeley.
- Roy, Ajit (2001), Associate Professor; Ph.D., Case Western Reserve University.
- Wang, Zhiyoung (1998), Associate Professor; B.S., M.S., Ph.D., Harbin University of Science and Technology.
- Wells, William R. (1986), Professor; B.S., Georgia Institute of Technology; M.A., Harvard University; M.S., Ph.D., Virginia Polytechnic Institute.

Professors Emeriti

Skaggs, Robert L. (1969-1999), Emeritus Professor; B.S., Missouri School of Mines; M.S., Ph.D., Iowa State University.

Among the subjects taught and researched by the faculty of the mechanical engineering program are the following: aerospace, vibrations and acoustics, heat transfer, fluid flow (and computational fluid dynamics), environmental transport processes, multiphase flow, energy conservation and conversion technologies, alternative energy including solar power, automatic control, robotics, biomedical engineering, nuclear engineering, structural properties of engineering materials, and composites.

Graduate students have access to all departmental laboratories and equipment as well as the facilities of the National Supercomputing Center for Energy and the Environment. The department supports numerous networked workstations.

The laboratories of the department include an extensive

acoustics and vibrations facility, a thermal-fluids capability, a full array of mechanical testing machines, measurement and control laboratory, and a low-moderate speed wind tunnel. A unique laboratory also exists for full-scale testing of ducts and diffusers, including indoor air quality and HVAC equipment. In addition to a recently established material performance laboratory, several faculty members are developing and testing different designs of solar power generators.

Master of Science in Mechanical Engineering

The Master of Science degree is designed to give post-baccalaurate students an in-depth understanding of a specific area within mechanical engineering.

Admission Requirements - M.S.E. Degree Program

In addition to the general requirements for admission to the Graduate College, an applicant for the M.S. program must complete the following requirements:

1. Application must be made to the Department of Mechanical Engineering. Applications must include all documentation as required by the Graduate College. The Department of Mechanical Engineering will admit the student and supervise the student's M.S. program.
2. The applicant must have a bachelor's degree in engineering or a closely related discipline. Students with non-engineering backgrounds will be required to complete a set of course work requirements that will assure successful completion of the M.S. specialization and qualify the student to sit for the Fundamentals of Engineering (FE) exam. The Graduate Program Committee (GPC) will decide upon special cases.
3. The applicant must submit a written statement of purpose indicating interests and objectives in working toward a M.S. degree. In addition, two letters of recommendation for the M.S.-level of study must be submitted. The statement and letters should be sent to the department.
4. Foreign applicants must take and obtain a satisfactory score of a minimum of 550 (213 computerized) on the TOEFL exam as required by the Graduate College.
5. The applicant must obtain a satisfactory score on the Graduate Record Exam (GRE) as determined by the GPC.
6. The GPC will examine the applicant's academic record and will make the final determination of the applicant's admissibility to the M.S. program. In general, a minimum postbaccalaureate GPA of 3.00 on a 4.00 scale or equivalent is required for admission in addition to a GPA of 3.00 on a 4.00 scale or equivalent in all engineering courses.
7. The UNLV Graduate College must formally admit the applicant.

Degree Requirements - M.S.E. Degree Program

Procedures and requirements for the M.S. will be prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. At least 15 credits must be from 700-level courses, and at least 15 credits must be from engineering courses. Students must choose one of the following options and take at least three of the courses listed under each respective option:
 - a. Dynamic Systems and Controls - MEG 625, MEG 629, MEG 725, MEG 729, MEG 740, MEG 741, and MEG 746;
 - b. Fluid/Thermosciences - MEG 700, MEG 701, MEG 702, MEG 703, MEG 704, MEG 705, MEG 706, MEG 707, MEG 708, MEG 710, MEG 711, MEG 714, and MEG 717;
 - c. Materials and Mechanics - MEG 641, MEG 643, MEG 661, MEG 732, MEG 734, MEG 742, MEG 741, and MEG 743;
 - d. Engineering Management - CEG 609, MBA 702, MBA 706, MBA 707, MBA 710, MBA 715, MEG 626, MEG 727, and MGT 701;
 - e. Mechanical and Environmental Systems - MEG 618, MEG 700, MEG 706, and MEG 720;
 - f. Nuclear Engineering - MEG 655, MEG 630, MEG 656, and MEG 705, MEG 706, MEG 707, and MEG 708;
 - g. Aerospace - MEG 700, MEG 701, MEG 702, MEG 705, MEG 706, MEG 741, and MEG 740.
2. Students pursuing the engineering management option are required to choose the Non-Thesis Option listed below. Students pursuing options other than the engineering management option may choose, subject to approval by the student's graduate committee, one of the two options listed below.

Thesis Option: Requires 24 credits of approved graduate courses plus six credits of work associated with the master's level thesis, for a total of 30 credits. The final examination will include a defense of thesis.

Non-Thesis Option: Requires 33 credits of approved graduate courses. At least 18 credits must be earned from 700-level courses, of which 15 credits must be in engineering.
3. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00 scale), no grades below C, (C- is not acceptable) and compliance with the letter and spirit of the *Graduate Catalog* and published policies of the Howard R. Hughes College of Engineering. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.
4. Only those courses in which a student received a grade of C or better may be used for graduate credit. Students must comply with Graduate College policy.
5. Each student's program should show suitable breadth and coherence. As specified in the Graduate Catalog, the program of study will be developed by the student

and advisor and filed with the Graduate College. Prior to filing, the program must receive approval by the student's committee. An approved program must be filed before the completion of nine credits of course work after admission (regular or provisional). The responsibility rests with the student. Students will be dropped from the graduate engineering program if they neglect this requirement.

Master of Science in Aerospace Engineering

The objectives of the M.S.A.E. degree are to provide a quality graduate educational program that will complement the existing undergraduate and graduate curricula in mechanical engineering. The aerospace graduate program will improve and enhance the capabilities of those students seeking careers in the aerospace field and supporting engineering work for the aerospace and aviation technology community. The majority of students seeking the M.S.A.E. degree will have undergraduate degrees in the fields of mechanical or aerospace engineering, or closely related fields of engineering, applied physics, or applied mathematics; some will already have graduate degrees in the more conventional areas of engineering or the sciences. Those individuals with engineering (as well as physical science) interests will use the M.S.A.E. to develop careers as well as improve their skills in the aerospace and aviation industry. Students enrolling in the program on a full-time basis will likely assist engineering faculty in obtaining sponsored project funding and performing innovative aerospace and aviation engineering research.

Admission Requirements – M.S.A.E. Degree Program

In addition to the general requirements for admission to the Graduate College, an applicant for the M.S.A.E. program must complete the requirements of the M.S.E. degree as listed in the previous section.

Degree Requirements - M.S.A.E. Degree Program

Procedures and requirements for the M.S.A.E. will be prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. At least 15 credits must be from 700-level courses, and at least 15 credits must be from engineering courses. Students must choose three courses from the following list of courses:
MEG 700, MEG 701, MEG 702, MEG 705, MEG 706, MEG 740, MEG 741.

In addition students must select at least two courses selected from the following list:

MEG 704, MEG 711, MEG 717, MEG 720, MEG 721, MEG 725, MEG 726, MEG 729, MEG 774, MEG 777

2. Students may choose, subject to approval by the student's graduate committee, one of the two options listed below.

Thesis Option: Requires 24 credits of approved graduate courses plus six credits of work associated with the master's level thesis, for a total of 30 credits. The final examination will include a defense of thesis.

Non-Thesis Option: Requires 33 credits of approved graduate courses. At least 18 credits must be earned from 700-level courses, of which 15 must be in engineering. To complete the Non-Thesis option, students must also successfully complete the Design Project course (MEG 796) or pass a comprehensive written and oral exit exam before receiving their degree.

3. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00 scale), no grades below C, (C- is not acceptable) and compliance with the letter and spirit of the *Graduate Catalog* and published policies of the Howard R. Hughes College of Engineering. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.
4. Only those courses in which a student received a grade of C or better may be used for graduate credit. Students must comply with Graduate College policy.
5. Each student's program should show suitable breadth and coherence. As specified in the Graduate Catalog, the program of study will be developed by the student and advisor and filed with the Graduate College. Prior to filing, the program must receive approval by the student's committee. An approved program must be filed before the completion of nine credits of course work after admission (regular or provisional). The responsibility rests with the student. Students will be dropped from the graduate engineering program if they neglect this requirement.

Master of Science in Biomedical Engineering

The objective of the M.S.B.E. degree program is to provide a graduate-level educational experience that will prepare individuals to undertake design and research in the area of biomedical engineering. The program is multi-disciplinary and integrates knowledge from the traditional engineering sciences, the life sciences, and medicine. Specific goals of the program include development of 1.) a thorough grounding in the life sciences; 2.) mastery of engineering tools and approaches; 3.) familiarity with the problems of making and interpreting quantitative measurements of living systems; 4.) the ability to use modeling techniques; and 5.) the ability to formulate and solve problems with medical relevance, including the design of devices, systems, and processes to improve human health.

Students are required to take a common core of introductory biomedical engineering and health science courses plus courses in at least one of the three following areas: 1.) biomechanics, ergonomics, and human factors; 2.) imaging and instrumentation; or 3.) fluid mechanics and transport processes.

Admission Requirements – M.S.B.E. Degree Program

In addition to the general requirements for admission to the Graduate College, an applicant for the M.S. program must complete the following requirements:

1. Application must be made to the Department of Mechanical Engineering. Applications must include all documentation as required by the Graduate College. The Department of Mechanical Engineering will admit the student and supervise the student's M.S. program.
2. The applicant must have a bachelor's degree in engineering or a closely related discipline. Students with non-engineering backgrounds will be required to complete a set of course work requirements that will assure successful completion of the M.S. specialization. For the biomechanics area, previous course work in engineering mechanics and strength of materials is required. Students with an interest in the imaging area must demonstrate proficiency in digital signal processing. Students wanting to specialize in the transport phenomena area must take prerequisite courses in fluid mechanics and thermodynamics if these courses were not included in their previous college courses. Applicants who are from a technical area outside of engineering (e.g. natural sciences) will have to satisfy a certain number of technical prerequisites including mathematics through differential equations, engineering physics, and chemistry, as well as the overall minimum GPA requirements. The Graduate Program Committee (GPC) will decide upon special cases.
3. The applicant must submit a written statement of purpose indicating interests and objectives in working toward a M.S. degree. In addition, two letters of recommendation for the M.S.-level of study must be submitted. The statement and letters should be sent to the department.
4. Foreign applicants must take and obtain a satisfactory score of a minimum of 550 (213 computerized) on the TOEFL exam as required by the Graduate College.
5. The applicant must obtain a satisfactory score on the Graduate Record Exam (GRE) as determined by the GPC.
6. The GPC will examine the applicant's academic record and will make the final determination of the applicant's admissibility to the M.S. program. In general, a minimum postbaccalaureate GPA of 3.00 on a 4.00 scale or equivalent is required for admission in addition to a GPA of 3.00 on a 4.00 scale or equivalent in all engineering courses.
7. The UNLV Graduate College must formally admit the applicant.

Degree Requirements – M.S.B.E. Degree Program

Procedures and requirements for the M.S.B.E. will be prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. At least 15 credits must be from 700-level courses, and at least 15 credits must be from engineering courses. Students are required to take a common core of introductory biomedical engineering and health science courses plus courses in an area of specialization. The areas of specialization include 1) transport processes, 2) Imaging and Instrumentation, 3) biomechanics and human factors and:

Biomedical Sciences Core: All students must take at least two of the courses below (note that courses numbered below 600 do not count toward the hours required for the M.S.B.E. degree).

BIO 209 Introduction to Cell Biology
 BIO 360 Mammalian Physiology
 BIO 730 (A,B,C) Advanced Research in the Biological Sciences

CHE 225 Organic Chemistry I

KIN 738 Human Physiology

Transport Processes Option (T). Students in this option must take at least three courses from the following list:

KIN 744 Thermoregulation During Physical Work

MEG 416/616 Introduction to Bioengineering (T1)

MEG 700 Advanced Fluid Mechanics

MEG 702 Computational Fluid Dynamics

MEG 704 Finite Element Applications in Mechanical Engineering

MEG 706 Convective Heat Transfer

MEG 710 Transport Phenomena in Bioengineering

MEG 711 Advanced Thermodynamics

Imaging and Instrumentation Option (I). Students in this option must take at least three courses from the following list:

CSC 469/669 Introduction to Digital Image Processing

CSC 766 Advanced Digital Image Processing

ECG 456/656 Introduction to Biomedical Signals & Systems (II)

ECG 731 Electronic Design with Integrated Circuits

ECG 732 Low Noise Electronics

ECG 751 Digital Signal Processing Theory

ECG 752 Digital Signal Processing Applications

ECG 753 Multidimensional Digital Signal Processing

ECG 756 Detection and Estimation of Signals in Noise

ECG 758 Adaptive Signal Processing with Neural Networks

Biomechanics and Human Factors Option (B). Students in this option must take at least three courses from the following list:
 MEG 416/616 Introduction to Biomechanical Engineering (B1)

CEG 678	Applied Finite Element Analysis
CEG 767	Human Factors in Transportation Engineering
CEG/MEG 774	Introduction to Theory of Elasticity and Plasticity I
CEG 776	Experimental Techniques in Structural Mechanics
EGG 451/651	Ergonomics
KIN 736	Biomechanical Applications in Kinesiology
KIN 743	Research Techniques in Biomechanics
MEG 616	Introduction to Biomechanical Engineering
MEG 625	Robotics
MEG 631	Mechanical Vibrations
MEG 643	Design Techniques in Mechanical Engineering
MEG 661	Composite Materials MEG 670
MEG 670	Experimental Mechanics of Materials
MEG 703	Continuum Mechanics
MEG 725	Vibrations I
MEG 726	Vibrations II
MEG 727	Engineering Optimization
MEG 729	Advanced Robotics
MEG 746	Experimental Design and Analysis of Digital Process Controls
MEG 740	Advanced Dynamics
MEG 741	Energy and Variational Methods in Applied Mechanics
MEG 742	Energy and Variational Method II

- Students may choose, subject to approval by the student's graduate committee, one of the two options listed below:

Thesis Option: Requires 24 credits of approved graduate courses plus six credits of work associated with the master's level thesis, for a total of 30 credits. The final examination will include a defense of thesis.

Non-Thesis Option: Requires 33 credits of approved graduate courses. At least 18 credits must be earned from 700-level courses, of which 15 credits must be in engineering.
- Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00 scale), no grades below C, (C- is not acceptable) and compliance with the letter and spirit of the Graduate Catalog and published policies of the Howard R. Hughes College of Engineering. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.
- Only those courses in which a student received a grade of C or better may be used for graduate credit. Students must comply with Graduate College policy.
- Each student's program should show suitable breadth and coherence. As specified in the Graduate Catalog, the program of study will be developed by the student and

advisor and filed with the Graduate College. Prior to filing, the program must receive approval by the student's committee. An approved program must be filed before the completion of nine credits of course work after admission (regular or provisional). The responsibility rests with the student. Students will be dropped from the graduate engineering program if they neglect this requirement.

Master of Science in Materials and Nuclear Engineering

M.S.M.N.E. is intended to provide the student with a solid background in either applied nuclear science and engineering, with an emphasis in the nuclear systems engineering subdiscipline, or material science and engineering, with an emphasis in materials performance. The program consists of two master's degree tracks: Materials Engineering and Nuclear Engineering. The materials engineering track consists of a core curriculum in material science, metallurgy, and materials performance, which is to be augmented by advanced-level classes in corrosion engineering, physical metallurgy, mechanical metallurgy, mechanics of materials, and nuclear materials. The nuclear engineering track consists of a core curriculum in applied nuclear science and engineering, coupled with advanced classes in the student's subdiscipline.

Admission Requirements - M.S.M.N.E. Degree Program

In addition to the general requirements for admission to the Graduate College, an applicant for the M.S. in Materials and Nuclear Engineering program must complete the following requirements:

- Application must be made to the Department of Mechanical Engineering. Applications must include all documentation as required by the Graduate College. The Department of Mechanical Engineering will admit the student and supervise the student's M.S. program.
- The applicant must have a bachelor's degree in engineering, preferably nuclear engineering, materials science, materials science engineering, metallurgical engineering, mechanical engineering, or a closely related discipline. Students with non-engineering backgrounds will be required to complete a set of course work requirements that will assure successful completion of the M.S. in Materials and Nuclear Engineering degree and qualify the student to sit for the Fundamentals of Engineering (FE) exam. The Graduate Program Committee (GPC) will decide upon special cases. For example, a student applying to the Materials and Nuclear Engineering program with an interest in the Materials Engineering track would be required to complete MEG 301 and 302 before beginning their core requirements.
- The applicant must submit a written statement of purpose indicating interests and objectives in working toward a M.S. degree. In addition, two letters of recommendation for the M.S.-level study must be submitted. The statement and letters should be sent to the department.
- Foreign applicants must take and obtain a satisfactory score of a minimum of 550 (213 computerized) on the TOEFL exam as required by the Graduate College.

5. The applicant must obtain a satisfactory score on the Graduate Record Exam (GRE) as determined by the GPC.
6. The GPC will examine the applicant's academic record and will make the final determination of the applicant's admissibility to the M.S. program. In general, a minimum postbaccalaureate GPA of 3.00 on a 4.00 scale or equivalent is required for admission in addition to a GPA of 3.00 on a 4.00 scale or equivalent in all engineering courses.
7. The UNLV Graduate College must formally admit the applicant.

Degree Requirements – M.S.M.N.E. Degree Program

Procedures and requirements for the M.S. degree will be prescribed by the Graduate College under Academic Policies, with additional provisions as follows:

1. At least 15 credits must be from 700-level courses and six credits of thesis are required. The remaining nine credits may be taken at the 600 or 700 level. Students must choose one of the following tracks:
 - a. **Materials Engineering Track** - Students must take three out of the following four courses:
 - MEG 734 Fracture of Engineering Materials
 - MEG 732 Mechanical Metallurgy
 - MEG 741 Energy and Variational Methods in Mechanics I
 - MEG 630 Corrosion Engineering

Suggested Electives for Materials Engineering Track:

 - MEG 742 Energy and Variational Methods in Mechanics II
 - MEG 650 Physical Metallurgy
 - MEG 661 Introduction to Composite Materials
 - MEG 670 Experimental Mechanics of Materials
 - b. **Nuclear Engineering** – For the Nuclear Engineering Track, students must take three out of the following courses:
 - PHY 631
 - or
 - RDCM 701 Applied Nuclear Physics
 - MEG 655 Fundamentals of Nuclear Engineering
 - MEG 706 Convective Heat Transfer

Suggested Electives for Nuclear Engineering Track:

 - MEG 702 Computational Fluid Dynamics
 - MEG 705 Conduction Heat Transfer
 - MEG 707 Radiation Heat Transfer
 - MEG 708 Convective Boiling and Condensation
 - MEG 711 Advanced Thermodynamics
 - MEG 656 Radioactive Waste Management
 - MEG 615 Design of Thermal Systems
2. Students may choose, subject to approval by the student's graduate committee, one of the two options listed below.

Thesis Option: Requires 24 credits of approved graduate courses plus six credits of work associated with the master's level thesis, for a total of 30 credits. The final examination will include a defense of thesis.

Non-Thesis Option: Requires 33 credits of approved graduate courses. At least 18 credits must be earned from 700-level courses, of which 15 must be in engineering. To complete the Non-Thesis option, students must also

successfully complete the Design Project course (MEG 796) or pass a comprehensive written and oral exit exam before receiving their degree.

3. Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00 (4.00 scale), no grades below C, (C- is not acceptable) and compliance with the letter and spirit of the Graduate Catalog and published policies of the Howard R. Hughes College of Engineering. If progress is not satisfactory, probation and separation may result, in accordance with the rules of the Graduate College. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise it to 3.00 or above.
4. Only those courses in which a student received a grade of C or better may be used for graduate credit. Students must comply with Graduate College policy.

Each student's program should show suitable breadth and coherence. As specified in the *Graduate Catalog*, the program of study will be developed by the student and advisor and filed with the Graduate College. Prior to filing, the program must receive approval by the student's committee. An approved program must be filed before the completion of nine credits of course work after admission (regular or provisional). The responsibility rests with the student. Students will be dropped from the graduate engineering program if they neglect this requirement.

Doctor of Philosophy in Engineering

Admission Requirements - Doctoral Degree Program

In order to be admitted to the Ph.D. program in Engineering in the field of Mechanical Engineering, a student must complete the following requirements:

1. Application must be made to the Department of Mechanical Engineering. Applications must include all documentation as required by the Graduate College. The Department of Mechanical Engineering will admit the student and supervise the student's Ph.D. program.
2. The applicant must have a Master of Science in Engineering degree or equivalent with a major in mechanical engineering or a closely allied field. Students with nonengineering backgrounds will be required to complete a set of course work requirements that will assure successful completion of the Ph.D. specialization and qualify the student to sit for the Fundamentals of Engineering (FE) exam. The Graduate Program Committee (GPC) will decide upon special cases.
3. The applicant must submit a written statement of purpose indicating interests and objectives in working toward a Ph.D. degree. In addition, three letters of recommendation for the Ph.D.-level study must be submitted. The statement and letters should be sent to the department.
4. Foreign applicants must take and obtain a satisfactory score of a minimum of 550 (213 computerized) on the TOEFL exam as required by the Graduate College.

5. The GPC will examine the applicant's academic record and will make the final determination of the applicant's admissibility to the Ph.D. program. In general, a minimum postbaccalaureate GPA of 3.20 on a 4.00 scale or equivalent is required for admission.
6. The applicant must obtain satisfactory scores on the Graduate Record Exam (GRE) as determined by the GPC.
7. The UNLV Graduate College must formally admit the applicant.

Degree Requirements - Doctoral Degree Program

The degree requirements for the Ph.D. in Engineering in the field of Mechanical Engineering include the following:

1. A Doctoral Advisory Committee composed of at least five members of the UNLV graduate faculty is to be formed for the student. Three of these faculty must be from the Department of Mechanical Engineering, the fourth from a relevant supporting field, and a fifth as appointed by the Graduate College.
2. The program of study must be submitted by the second semester of study. The program of study is to be prepared by the student and his/her doctoral advisor, and must be approved by the student's Doctoral Advisory Committee and the GPC.
3. Doctoral students must complete a minimum of 27 credit hours of course work beyond the degree of Master of Science in Engineering (M.S.) or equivalent. A minimum of 18 of these credits must be 700-level courses. The student's Doctoral Advisory Committee may add other requirements in accordance with the individual's background and area of study.
4. In addition to these course requirements, a minimum of 18 credits of Dissertation Research (MEG 799) is also required.
5. In order to show breadth and depth of knowledge in his/her discipline, the doctoral student must pass either a written qualifying exam, or an oral qualifying exam, or both as determined by the student's Doctoral Advisory Committee. These examinations are prepared by the department and supervised by the GPC. The qualifying exams must be scheduled during the first year of study. The qualifying exam can be taken a maximum of two times. Failure to take the exam within the first year or failure to pass the exam in the second attempt will automatically result in terminating student from the program.
6. The doctoral student must pass a preliminary exam consisting of a written proposal for the dissertation research, followed by an oral defense of the proposal. The Doctoral Advisory Committee must approve the dissertation research proposal. The student is advanced to candidacy for the Ph.D. upon completion of all course work and approval of the dissertation before the Doctoral Advisory Committee.
7. All requirements for the Ph.D. are met upon the satisfactory completion of the proposed research, the submission of a satisfactory dissertation, and the successful oral defense of the dissertation before the Doctoral Advisory Committee.

Mechanical Engineering

MEG 700 **3 credits**

Advanced Fluid Mechanics I

Covers area of viscous laminar fluid flow. Presents concept of shear stresses and develops Navier-Stokes equation. Applications such as boundary layer flow studied as are some solutions of viscous fluid flow. Prerequisites: CEG 303, MEG 445.

MEG 701 **3 credits**

Advanced Fluid Mechanics II

Potential flow theory with emphasis on complex representations, conformal mapping, Schwarz Christoffel transformations, airfoils. Compressible flow, free shear layers, shock waves, compressible boundary layers, two- and three-dimensional supersonic flows. Prerequisite: MEG 700 or consent of instructor.

MEG 702 **3 credits**

Computational Fluid Dynamics

Application of numerical methods to solve highly nonlinear equations of motion and energy associated with fluid dynamics. Among other methods, finite difference and finite element methods discussed along with use of commercial software packages. Prerequisites: MEG 445/645, MEG 700, or consent of instructor.

MEG 703 **3 credits**

Continuum Mechanics

(Formerly CEG 711.) Matrices and tensors, stress deformation and flow, compatibility conditions, constitutive equations, field equations and boundary conditions in fluids and solids, applications in solid and fluid mechanics. Prerequisites: MAT 429 and graduate standing.

MEG 704 **3 credits**

Finite Element Applications in Mechanical Engineering

Finite Element Method used historically for structurally related problems. Advances in application and development of Finite Element Method particularly useful in fluid flow and heat transfer related problems. PC, workstation, and mainframe finite element computer codes used to assist students in solving fluid and heat transfer problems. Prerequisites: MEG 445/645, and MEG 400/600 or MEG 700, or consent of instructor.

MEG 705 **3 credits**

Conduction Heat Transfer

Designed to solve more advanced heat transfer problems by conduction. Analytical and numerical techniques in heat conduction covered. Review of elementary problems presented. Advanced analytical methods using Bessel functions, separation of variables and Laplace transforms, among others. Solutions using finite differences covered. Prerequisites: MEG 314 and MEG 445 or equivalent or consent of instructor.

MEG 706 **Convective Heat Transfer** **3 credits**

Conservation principles, fluid stresses and flux laws, boundary layer equation, laminar and turbulent heat flow inside tubes. Heat transfer in laminar and turbulent boundary layers. Influence of temperature dependent fluid properties and free-convection boundary layers. Prerequisites: MEG 314 and MEG 700.

MEG 707 **Radiation Heat Transfer** **3 credits**

Advanced engineering analysis of thermal radiation heat transfer. Spectral and gray-body analysis. Exchange of radiation between surfaces and through absorbing, emitting, and scattering media. Radiation combined with conduction and convection. Prerequisite: MEG 314 or equivalent.

MEG 708 **Convective Boiling and Condensation** **3 credits**

Basic models, empirical treatments of two-phase flow. Introduction to convective boiling, subcooled boiling, void fraction and pressure drop in subcooled boiling, saturated boiling heat transfer, critical heat flux, condensation. Prerequisite: MEG 314 or consent of instructor.

MEG 710 **Transport Phenomena in Bioengineering** **3 credits**

Transport phenomena in bioengineering at molecular, cellular and tissue levels. Topics include blood flow in large and small vessels, gas exchange in lung, biomass and heat transfer in microcirculation, ion transport across cell membrane, cell migration, renal transport, controlled drug delivery and transport in tumors. Prerequisites: MEG 380 or MEG 314 or equivalent.

MEG 711 **Advanced Thermodynamics** **3 credits**

Advanced concepts and laws of classical equilibrium thermodynamics as applied to engineering problems. Introduction to statistical thermodynamics. Prerequisite: MEG 311 or equivalent.

MEG 714 **Computational Aspects of Solar Energy** **3 credits**

Theory and practice in the design of solar energy components and systems. Included are collectors, concentrators, receivers, storage, and power systems. Emphasis is on the simulation of transient systems. Prerequisites: MEG 314 and MEG 445/645, or consent of instructor.

MEG 717 **Transport Phenomena** **3 credits**

Momentum, energy, and mass transport at molecular motion, microscopic levels. Momentum flux tensors, heat flux vectors, and mass flux vectors. Transport in laminar or turbulent flow. Transport in isothermal or nonisothermal systems. Transport in single or multicomponent systems. Interface transport and chemical reaction. Prerequisites: MEG 314 and MEG 380, or equivalent, or consent of instructor.

MEG 720 **Acoustics I** **3 credits**

Introduction to wave motion and general solution techniques associated with wave equation; propagation of waves in solid media; one-dimensional acoustic waves, acoustic transmission phenomena, and propagation of sound outdoors. Prerequisites: Graduate standing and MAT 429.

MEG 721 **Acoustics II** **3 credits**

Three-dimensional sound waves; experimental measurement techniques associated with acoustics; acoustic filter theory; other advanced topics in acoustics. Prerequisite: MEG 720.

MEG 725 **Vibrations I** **3 credits**

Vibrations of systems with one-degree-of-freedom and more than one-degree-of-freedom. Methods for finding natural frequencies, discrete systems and continuous systems. Prerequisite: MEG 431.

MEG 726 **Vibrations II** **3 credits**

Virtual work, Hamilton's principles, Lagrange's equation, influence coefficients, Green's function as applied to advanced vibration problems; vibration of continuous systems; modal analysis. Prerequisites: Graduate standing and MEG 725.

MEG 727 **Engineering Optimization** **3 credits**

Introduction to optimization, univariate functions, multivariate functions, constrained optimality criteria, penalty method, constrained direct search, engineering case studies, linear programming. Prerequisite: MEG 445 or equivalent, or consent of instructor.

MEG 729 **Advanced Robotics** **3 credits**

In-depth study of advanced automation concepts and robotic manipulators. Topics including 3-D kinematics, trajectory generation, compliance analysis, dynamic control of robotics along with concept of assembly operations and machine vision. Prerequisite: MEG 421 or consent of instructor.

MEG 732 **Mechanical Metallurgy** **3 credits**

Behavior and response of metals to applied forces. Five areas covered: mechanical fundamentals, metallurgical fundamentals, materials testing, plastic forming of metals, and modes of failure. Prerequisites: MEG 301 and MEG 302.

MEG 734 **3 credits**

Fracture of Engineering Materials

Stress-strain relationships during elastic and plastic deformation, linear elastic and elastic-plastic fracture mechanics, Griffith's theory, stress analyses of cracks, plastic zone size, fracture toughness measurements, ductile-to-brittle transition, fatigue failure mechanisms, environment-assisted cracking and relevant test methods, metallographic evaluations using state-of-the-art techniques. Prerequisites: MEG 301 and 302 or equivalent.

MEG 740 **3 credits**

Advanced Dynamics

Applications of Lagrangian and Newtonian mechanics to mechanical systems. Includes kinematics, moving reference frames, rigid body dynamics, oscillations and mode forms, and gyroscopic effects. Prerequisites: MEG 320, MEG 431 or consent of instructor.

MEG 741 **3 credits**

Energy and Variational Methods in Applied Mechanics

Review of equations of mechanics, energy and variational principles, variational methods of approximation. Prerequisites: MEG 302 and MAT 429 or consent of instructor.

MEG 742 **3 credits**

Energy and Variational Methods in Applied Mechanics II

Theoretical principles for solving solid mechanics problems. Direct continuation of MEG 741. Topics covered include: computational solution methods to governing equations, free vibration and forced response of elastic systems, stability analysis, solution methods to governing equations, free vibration and forced response of elastic systems, stability analysis, solution methods for beams, plates, and structural systems. Prerequisite: MEG 741.

MEG 746 **3 credits**

Experimental Design and Analysis of Digital Process Control Systems

Applications, design, and experimental practice of mechanical linear and discrete systems: hydraulic, pneumatic, elastic multibody systems, centripetal and coriolis effects, automatic model and code generation. Discrete nonlinear control systems modeling, simulation, design using state space methods. Aspects of system identification, robust and optimal control. Prerequisite: MEG 421 or equivalent.

MEG 752 **3 credits**

Advanced Air Pollution Control

Fundamental chemical and physical principles of generation and control of air pollutants, and applications to pollution control equipment. Pollutant and particle formation during combustion. Gas adsorption and absorption fundamentals and tower/column design. Pollution control strategies. Prerequisites: CEG 452/652, MAT 430, MEG 311, or equivalents. Strongly recommended: MEG 314 and MAT 665 or equivalents.

MEG 759 **3 credits**

Mass Transfer in Environmental Systems

Fundamentals of mass transfer by diffusion and advection. Solutions to steady-state and transient problems in several dimensions. Applications to natural and engineered systems. Prerequisites: CEG 303, MAT 430, or equivalent, or consent of instructor.

MEG 774 **3 credits**

Introduction to Theory of Elasticity and Plasticity I

Introduction to theoretical and applied elasticity and plasticity theory-solutions to engineering problems in structural mechanics and geotechnical engineering. Response of isotropic, orthotropic and layered media to applied stresses and strains. Prerequisites: MAT 429 and graduate standing only.

MEG 777 **3 credits**

Application of High-Performance Computing Methods in Science and Engineering

(Same as MAT 777.) Application of high performance computing systems to science and engineering, models for numerically intensive problem solving, high performance numerical algorithms, FORTRAN 90 and high-performance FORTRAN. Prerequisites: Knowledge of UNIX, FORTRAN, and previous course on numerical methods. Graduate standing.

MEG 791 **1-3 credits**

Independent Study in Mechanical Engineering

Independent study of a selected mechanical engineering topic. May be repeated to a maximum of three credits. Prerequisites: Graduate standing in mechanical engineering and consent of instructor.

MEG 795 **1-6 credits**

Advanced Topics in Mechanical Engineering

Outlet for experimental and other advanced topics which may be of current interest. Topics and credits to be announced. May have a laboratory. May be repeated to a maximum of six credits.

MEG 796 **1-3 credits**

Design Project in Mechanical Engineering

Synthesis course involving students in the design process from analysis and proposal to solution. May be repeated to a maximum of three credits. Prerequisites: Graduate standing in mechanical engineering and consent of instructor.

MEG 797 **3-6 credits**

Thesis in Mechanical Engineering

May be repeated but only six credits will be applied to the program. S/F grading only. Prerequisite: Graduate standing in mechanical engineering.

MEG 799**1-6 credits****Dissertation**

Research analysis and writing towards completion of dissertation and subsequent defense. May be repeated to a maximum of 18 credits allowed toward the degree. S/F grading only. Prerequisites: Graduate standing in Ph.D. program and consent of advisor.

Several advanced undergraduate courses are available for graduate credit. These include:

MEG 600	Intermediate Fluid Mechanics
MEG 601	Gas Dynamics I
MEG 602	Aerodynamics
MEG 611	Engineering Thermodynamics II
MEG 615	Design of Thermal Systems
MEG 616	Introduction to Biomechanical Engineering
MEG 618	Air Conditioning Engineering Systems
MEG 619	Advanced HVAC and Energy Conservation Systems
MEG 625	Robotics
MEG 626	Manufacturing Processes
MEG 627	Manufacturing Systems
MEG 629	Computer Control of Machines and Processes
MEG 630	Corrosion Engineering
MEG 631	Mechanical Vibrations
MEG 634	Noise Control
MEG 641	Advanced Mechanical Engineering Design
MEG 642	Advanced Mechanism Design
MEG 643	Design Techniques in Mechanical Engineering
MEG 645	Computational Methods for Engineers
MEG 650	Physical Metallurgy
MEG 650L	Physical Metallurgy Laboratory
MEG 655	Fundamentals of Nuclear Engineering
MEG 656	Radioactive Waste Management
MEG 661	Introduction to Composite Materials
MEG 670	Experimental Mechanics of Materials
MEG 695	Special Topics in Engineering

College of Fine Arts

The graduate programs in the College of Fine Arts are considered among the very best in the country. Indeed, several programs are considered the “best!” The deserved reputations of these discrete programs are based largely on the excellent graduate faculty, which consists of highly trained artists and educators of national stature. Graduate programs include: the M.F.A. degree in visual arts; M.M. degree in music with programs in applied music, music education, and theory/composition and the Doctor of Music Arts (D.M.A.); M.F.A.s in design/theatre technology, music theatre performance, screenwriting, and playwriting; an M.A. in theatre research; and, a Master of Architecture degree. We have designed all graduate programs, at the professional level, to prepare students to compete aggressively in their chosen fields. Thanks to an excellent artist-in-residence program, our students are exposed to, and work with, professionals who regularly visit the college. Certain of the programs have developed relationships with the best professional outlets in their areas, allowing students to work and interact with professionals prior to graduation. All graduate programs are accredited by their individual accrediting agencies.

The College of Fine Arts is committed to excellence in the classroom in conjunction with practical experience, which hones the skills and talents of its students. An excellent faculty, excellent facilities, excellent connections to the professions, and excellent students all contribute to a fast-growing college that can enhance careers and help dreams become realities.

Jeffrey Koep, Dean

School of Architecture

Director

Kroelinger, Michael D. (2003), Professor; B.S., University of Alabama; M.S., University of Tennessee; M.Arch., University of Arizona; Ph.D., University of Tennessee.

Graduate Coordinator

Fernandez-Gonzalez, Alfredo (2003), Assistant Professor; B.Arch., Universidad La Salle; Specialist, National University of Mexico; M.Arch, University of Oregon.

Graduate Faculty

Alcorn, Michael (1993), Associate Professor; B.Arch., University of Kentucky, M.Arch., University of Illinois; M.F.A., Art Institute of Chicago.
Beckman, Richard (1988), Associate Professor; B.A., University of Oregon; M.Arch., Harvard University.
Chirapiwat, Thana (2005), Assistant Professor; B.Arch., Silpakorn University; M.S. Columbia University; M.U.P., Ph.D., University of Michigan.
Hashem, Zouheir (1994), Associate Professor; B.S., University of Texas at Austin; M.S., Ph.D., University of Texas at Arlington.
Hoversten, Mark (1991), Professor; B.F.A. and B.L.A., University of Minnesota; M.F.A., University of Iowa; M.A., University of New Mexico.
Johnston, Jeffrey (2004), Assistant Professor; B.L.A., Oklahoma State University; M.A., Purdue University.
Lawrence, Attila (1988), Professor; B.F.A., Philadelphia College of Art; M.A., Pennsylvania State University.
Ortega, Daniel (2000), Assistant Professor; B.L.A., University of Nevada, Las Vegas; M.L.A., Rhode Island School of Design.
Stern, Ralph (2004), Associate Professor; B.Arch., University of Oregon; DipL-Ing. USA; BAT Ila, Technische Universität Berlin.
White, Janet (1999), Assistant Professor; A.B., Bryn Mawr College; M.Arch., Columbia University; M.A., Ph.D., Cornell University.

The School of Architecture offers an NAAB accredited Master of Architecture professional degree (M. Arch). The M. Arch. program has the goals of developing students' abilities to conceive and accurately represent environmentally sound and aesthetically fitting spaces at different scales and to provide a basis for understanding the consequences that these spaces have for their inhabitants, for society, and for the environment.

The School of Architecture capitalizes on the unique conditions provided by the city of Las Vegas and Southern Nevada. The School of Architecture current research emphasis areas are: 1. Environmental, historic, and socio-cultural contexts ranging from the city to the building site; 2. Form, spatial aspects, and aesthetic considerations; 3. Sustainable desert climate architecture; 4. Solar and energy efficient design; and 5. Tourism and recreation aspects. Furthermore, our students are partaking in excellent employment opportunities in the design and construction professions during this period of unprecedented regional growth.

Admission Requirements

Each Master of Architecture program applicant must hold a baccalaureate or graduate degree from a regionally accredited college or university recognized by the University of Nevada, Las Vegas. Applicants must have a cumulative undergraduate GPA of 3.00 or higher. Applicants are also required to submit a design portfolio for review, a statement of intent, two letters of reference, and GRE scores of 410 or higher in the verbal section and 430 or higher in the quantitative section. The combined GRE score of these two sections may be no less than 850. International students whose native language is not English must also submit a TOEFL score of 550 (written) or 213 (computerized) or better.

Interested applicants may request, from the School of Architecture directly, a more detailed statement outlining the Master of Architecture program. Updated information can also be accessed through School of Architecture's web site (<http://architecture.unlv.edu/>).

Master of Architecture Program

Because of differing levels of preparation among entering master's degree applicants, different paths for admission have been established according to NAAB accreditation requirements; namely, the 4+2 and the 3+ paths.

1. The 4+2 path is intended for students holding the Bachelor of Science degree with a major in architecture or its equivalent in curriculum content to the UNLV undergraduate program. Qualified applicants holding a Bachelor of Architecture professional degree (i.e., five year) from an institution recognized by UNLV and meeting the admission requirements may be granted advanced placement.
2. The 3+ path is designed for qualified applicants holding undergraduate or graduate degrees in fields of study other than architecture. If admitted, students are required to complete both undergraduate- and graduate-level preparatory work as specified by the program faculty before proceeding to the final four semesters of the Master of Architecture program.

Accreditation

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, earned sequentially, comprise an

accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

The NAAB grants candidacy status to new programs that have developed viable plans for achieving initial accreditation. Candidacy status indicates that a program should be accredited within six years of achieving candidacy, if its plan is properly implemented.

The UNLV Master of Architecture program was accredited by NAAB in 1997.

Degree Requirements

The minimum graduate credit hours required for the Master of Architecture degree is 48. Students admitted into the 3+ path are, in addition, required to complete preparatory undergraduate- and graduate-level work as specified by the program faculty.

Required Graduate Courses

Design Studios	24 credits
AAE 771L, AAE 772L, AAE 789, and either AAE 790 or AAE 791	
History/Theory/Criticism	3 credits
AAE 751	
Building Systems	3 credits
ABS 741	
Design Management	6 credits
AAE 755 and AAE 756	
Concentration Electives	12 credits
Selected graduate-level courses as approved by the graduate coordinator.	

Additional Required Courses for 3+ Path

Design Studios	24 credits	
AAE 711L, AAE 712L, AAE 713L, and AAE 714L ADD 600		
(if not previously completed)		0 credits
Selected undergraduate architecture courses as required by faculty review.		

The following requirements apply to graduate students:

1. After admission, students are required to maintain a minimum GPA of 3.00 on a 4.00 point scale. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise his/her GPA to 3.00 or higher.
2. Only those courses in which a student receives a grade of B- or better may be used for graduate credit. Students must comply with all UNLV and Graduate College policies.
3. As specified in the *Graduate Catalog*, the student and the graduate coordinator will develop and file a program of study with the Graduate College. Before filing, the program must receive approval by the School of Architecture Graduate Committee.
4. In order to assess the student's progress in the program, the School of Architecture Graduate Committee will meet once a year with the student to determine whether or not he/she may advance to the next graduate year.

5. As a final requirement for the M. Arch. professional degree, each student is required to present his/her Professional Project (Professional Project Option) to the School of Architecture Graduate Committee, or take a final oral examination in which the student will defend his/her master's written thesis (Thesis Option).

Professional Project Option

The student must successfully complete a Professional Project developed as part of the course work of the AAE 789 and AAE 791 Design Studios. The Professional Project should address a significant architectural problem and demonstrate a comprehensive design solution. The requirements and evaluation of this project will be determined by the instructor of the AAE 789 and AAE 791 design studio sequence.

Thesis Option

In lieu of the Professional Project, a student may elect with the approval from the School of Architecture Graduate Committee to write a research-based Master's thesis. Once a student chooses to do the Thesis Option, he/she will have to select a four-member Thesis Advisory Committee that will be appointed with the approval of the graduate coordinator and the Graduate College. The master's thesis will have to focus on an area of concentration approved by the student's Thesis Advisory Committee and supported by elective course work related to the selected concentration subject.

The instructions outlined in the Graduate College Guide to Preparing and Submitting Your Thesis or Dissertation must be followed in the preparation and final submission of the thesis. In addition to the requirements of the Graduate College, a bound copy must be submitted to the student's Thesis Advisory Committee chair and to the Architecture Studies Library.

The school reserves the right to retain any or all student projects for the program's future use and exhibition.

Design

AAE 701 **6 credits**

International Study

Full-time study of architecture and/or allied studies in a foreign location as designated by the program. May be repeated to a maximum of 12 credits. Prerequisites: Consent of instructor.

AAE 793 **1-3 credits**

Independent Study

Independent study of a selected topic in architectural design. May be repeated to a maximum of six credits. Prerequisites: Consent of instructor.

AAE 795 **1-4 credits**

Advanced Special Topics in Design

Experimental and other topics which may be of current interest in design. Topics and credits to be announced. May be repeated to a maximum of eight credits. Prerequisites: Graduate admission and consent of instructor.

Architecture

AAE 711L **6 credits**

Graduate Design I: Design and Communication

Basic principles of design and communication. Understanding of the fundamentals of architectural graphics, 2-D design principles, 3-D composition and the effect of design elements on design decisions. Prerequisites: Permission of graduate coordinator and consent of instructor.

AAE 712L **6 credits**

Graduate Design II: Fundamentals

Principles of design for graduate students. Understanding of the fundamentals of architectural design principles, site planning, architectural programming, response to specific and unique climate conditions for a given site. Prerequisites: Permission of graduate coordinator and consent of instructor.

AAE 713L **6 credits**

Graduate Design III

Design of residential structures at different scales. Emphasis on psychological and behavioral aspects of space and analysis of user needs. Prerequisites: AAE 712L, consent of instructor and graduate coordinator.

AAE 714L **6 credits**

Graduate Design IV

Design of medium scale urban buildings. Emphasis on integration of building systems, urban design issues, and value engineering analysis. Prerequisites: AAE 713L, consent of instructor and graduate coordinator.

AAE 751 **3 credits**

Contemporary Architectural Theories

Study of contemporary architectural theories tracing the development of thought critical of modernism and the emergence of more recent positions in architecture. Prerequisites: AAE 652 or equivalent, consent of instructor.

AAE 735 **3 credits**

Developing Sustainable Design

Exploration of sustainable design emphasizing application of analytical, conceptual, and representational skills within projects that engage cultural, ecological, technological, and urban contexts. Prerequisite: Graduate standing.

AAE 755 **3 credits**

Design Practice Management I

Investigation of professional practice issues in architecture focusing on legal, contractual, and ethical concerns. Prerequisite: Graduate standing.

AAE 756 **3 credits**
Design Practice Management II

Investigation of professional management and organizational issues in the practice of architecture including project delivery, strategic business and financial planning. Prerequisite: Graduate standing and consent of instructor.

AAE 770 **3 credits**
Research Methods in Environmental Design

Survey of research methods in environmental design. Quantitative and qualitative methods used in researching design, social/behavioral and technical problems in architecture.

AAE 771L **6 credits**
Architectural Design V

Design and presentation of complex urban developments and multistory structures in an urban context. Prerequisite: Graduate standing or consent of instructor.

AAE 772L **6 credits**
Architectural Design VI

Continuation of Architectural Design V, AAE 771L. Prerequisite: AAE 771L.

AAE 775 **3 credits**
Tourist Facility Design and Development

Focuses on the interrelationships of social, economic and physical aspects of total tourist facilities design, with emphasis on the physical development of tourism, planning concepts of tourist centers and resort areas. Prerequisite: Consent of instructor.

AAE 780 **3 credits**
The Design-Build Process

Design-build process for project delivery. Analysis of alternative methods. Exploration of design-build concept from initial phases through to project start up and delivery. Prerequisite: Graduate standing.

AAE 789 **6 credits**
Architecture Research Studio

Comprehensive building design project producing final report summarizing the building typology and conceptual design research and definitive written program requirements. Prerequisite: Graduate standing.

AAE 790 **6 credits**
Thesis Writing

Full draft of the written thesis must be completed. Refinement of the problem statement and methodology, completion of literature review, investigation of the chosen problem, data collection and analysis expected. May be repeated until course requirements are satisfied, but only six credits counted toward M.Arch. degree. S/F grading only. Prerequisite: AAE 789.

AAE 791 **6 credits**
Final Project Design

Design of a complex building, a major design competition, or a comprehensive, integrated building design problem. Prerequisite: AAE 772L.

AAE 793 **1-3 credits**
Advanced Independent Study

Advanced independent study of a selected topic in architectural design. Paper required. May be repeated to a maximum of six credits. Prerequisites: Graduate standing and consent of instructor.

AAE 795 **1-4 credits**
Advanced Special Topics in Design

Outlet for experimental and other topics which may be of current interest in design. Topics and credits to be announced. May be repeated to a maximum of eight credits. Prerequisites: Graduate admission and consent of instructor.

Building Science

ABS 731 **3 credits**
Lighting Design and Technology

Provides an understanding of architectural lighting design. Fundamental principles of light, vision and perception, visual comfort and performance, daylight and electric light sources, systems and luminaires, electrical and lighting codes, and lighting design for a variety of applications. Emphasis on energy-efficient design strategies, system integration and occupant comfort. Prerequisites: ABS 331 and ABS 332 or equivalent.

ABS 732 **3 credits**
Solar Energy Applications in Architecture

Solar energy as a renewable energy resource for heating and cooling of buildings. Presents technical and design issues of passive and active solar energy systems, as well as solar electric power (photovoltaics). Emphasis on architectural design integration and occupant comfort. Explores design-related projects and case studies of existing solar buildings. Prerequisites: ABS 331 and ABS 332 or equivalent.

ABS 741 **3 credits**
Integrated Building Systems

Design of building structures together with mechanical and electrical services, life safety codes, and building codes. Prerequisite: Graduate standing.

ABS 743 **3 credits**
Advanced Computer Applications for Structures

Application of specialized computer programs in structural design. Prerequisites: ABS 341.

ABS 793 **1-3 credits**

Advanced Independent Study

Advanced independent study of a selected building science topic. Paper required. May be repeated to a maximum of six credits. Prerequisites: Graduate standing and consent of instructor.

ABS 795 **1-4 credits**

Advanced Special Topics in Building Science

Outlet for experimental and other topics of interest in advanced building science. Paper required. Topics and credits to be announced. May be repeated to a maximum of eight credits. Prerequisites: Graduate standing and consent of instructor.

The following courses may also be used for graduate elective credit. For descriptions of 600-level courses, please consult the current UNLV *Undergraduate Catalog* where they are listed as 400-level classes.

- AAD 600 Clinical Internship
- AAD 601 International Study
- AAD 661 Computer Applications in Architecture I
- AAD 662 Computer Applications in Architecture II
- AAD 691 Professional Practice
- AAD 693 Independent Study
- AAD 695 Special Topics in Design
- AAE 653 Visionary and Utopian Architecture: Plato to Bladerunner
- AAE 655 18th and 19th Century Architectural History and Theory
- AAE 656 Twentieth-Century Architecture History and Theory
- AAE 657 Architecture in Las Americas
- AAE 660 Issues in Contemporary Urbanism
- AAE 685 Non-Western Settlements
- AAE 696 Special Topics in Architectural History and Theory
- AAE 693 Independent Study
- AAE 695 Special Topics in Architectural Design
- AAI 650 Designed Environment and Human Behavior
- AAI 655 Facilities Planning and Design
- AAI 680 Furniture Design
- AAL 655 Landscape Interpretation
- AAL 656 Campus Planning and Design
- AAL 665 GIS Planning Methods
- AAL 667 History and Theory of Golf Course Development
- AAL 668 Golf Course Design
- AAP 630 Land Use Management
- AAP 646 Urban Land Use: Planning and Controls
- ABS 640 Structures For Architects II
- ABS 641 Structures For Architects III
- ABS 643 Interior Lighting Design
- ABS 693 Independent Study
- ABS 695 Special Topics in Building Science

In addition, each semester elective courses are offered by various faculty members. Please check with the School of Architecture for current listings of such offerings.

Art

Chair

Burns, Mark (1992), Associate Professor; B.F.A., School of Dayton Art Institute; M.F.A., University of Washington.

Graduate Coordinator

Rafat, Pasha M. (1986), Associate Professor; B.S., Arizona State University; M.A., M.F.A., California State University, Fullerton.

Graduate Faculty

- Angel, Catherine (1991), Professor; B.F.A., University of Oklahoma; M.F.A., Indiana University.
- Hickey, Dave (1991), Professor; B.A., Texas Christian University; M.A., University of Texas.
- Catterall, John E. (1999), Professor, B.A., University of Wyoming; M.F.A., Washington State University.
- Holder, Thomas J. (1971), Professor; B.A., San Diego State University; M.F.A., University of Washington.
- Kelly, Cathie C. (1980), Associate Professor; A.B., Sweet Briar College; Ph.D., Pennsylvania State University.
- Leaf, Bill S. (1973), Professor; B.F.A., San Francisco Art Institute; M.A., University of California, Davis.
- Lumpkin, Olivia Libby (2000), Assistant Professor; B.A., University of Houston; M.A., University of Texas; Ph.D., University of New Mexico.
- McDonald, Aya Louisa (2000), Assistant Professor; B.A., M.A., Ph.D., Stanford University.
- Pink, James B. (1987), Professor; B.A., M.A., Northern Illinois University; M.F.A., University of South Florida.
- Tracy, Robert H. (1984), Associate Dean, College of Fine Arts; B.A., California State University, Hayward; M.A., Ph.D., University of California, Los Angeles.
- Warner, Mary (1991), Associate Professor; B.A., M.A., California State University, Sacramento.
- Wysocki, Robert (2001), Assistant Professor; B.F.A., University of California, Berkeley; M.F.A., Yale University.

Professors Emeriti

- Abbey, Rita Deanin (1967-1987), Emeritus Professor; B.F.A., M.A., University of New Mexico.
- McCullum, Michael L. (1969-1995), Emeritus Dean of Fine and Performing Arts; A.B., Humboldt State University; M.A., M.F.A., University of California, Berkeley.

Students interested in pursuing the visual arts Master of Fine Arts are encouraged to review the graduate curriculum found in this catalog and reflect on the thoughts, feelings and perceptions offered by a diverse UNLV Department of Art faculty, who serve as a rich and vital resource for the contemporary art scene. The department's graduate curriculum offers various tracks of emphasis, which are indicative of the general declarations, visions, or centers of tendencies for the dissemination of modernist aesthetic and artistic precepts. Although fundamentally aimed at an enrichment of life and mind through advanced study in studio art, the M.F.A. course of study is also designed to provide training and experience for those students interested in careers as professional artists.

The graduate program, a three-year curriculum consisting of 60 credit hours of instruction, may be taken leading to the Master of Fine Arts degree in any one of the following seven areas: ceramics, drawing, painting, photography, printmaking, sculpture, or graphic design. The National Association of Schools of Art and Design has fully accredited the graduate program. A number of graduate assistantships and private studio spaces are available to assist and support students in their pursuit of the M.F.A.

Admission Requirements

A student working toward the M.F.A. in Art may select a major in ceramics, painting, photography, printmaking, drawing, sculpture, or graphic design. Applicants for the program leading to this degree must hold a Bachelor of Fine Arts in Art (or an equivalent degree) from an accredited university.

To be considered for admission to the program, applicants must submit for approval 20 slides of their work, a statement of intent, a resumé, official transcripts, and three letters of recommendation. These materials should be sent directly to the Department of Art. The application for admission, request for graduate assistantship, and an additional set of original transcripts should be sent directly to the Graduate College.

To enter the program, the student should have a baccalaureate in the field in which he or she expects to major and should have completed at least 60 hours in art and art history as a requirement for that degree. A student with less than 60 hours must enroll in undergraduate courses until this requirement is met.

Degree Requirements

Sixty credit hours are required to complete the degree. Approximately six regular semesters are necessary to cover requirements and prepare for the final exhibition. The M.F.A. candidate must be a full-time student (nine credits per semester).

Students with a Master of Arts degree must complete a minimum of 45 credits beyond the M.A. in the M.F.A. program. The student's committee and the graduate coordinator will determine the exact number of credits to be taken.

After completing approximately three semesters, or thirty credit hours, in the M.F.A. program, the candidate's work must be submitted to a committee for re-evaluation. The committee, selected by the major professor and the student, determines if the student's progress meets the standards required for advancement to candidacy.

The student's committee determines the requirements for the degree with the following exceptions:

1. Six hours of ART 721, Graduate Faculty Studio (taken in the first and second semester of entering the program).
2. Graduate students are required, unless exempted by their committee, to take nine hours of art history classes, art history seminars, theory classes or directed reading.
3. Six hours of ART 700, Seminar in Studio Practices (starting with the Fall semester in which the student enters the program).

4. Four hours of ART 777 (last semester).
5. The remaining thirty-eight hours needed for graduation will be determined by advisement of the candidate's committee.

Thesis Exhibition

The thesis is an exhibition of the student's work done specifically to meet this requirement. The thesis exhibition must have the approval of the student's committee. After advancement to candidacy, students must complete a comprehensive project consisting of an exhibition of a representative body of creative work and a statement (2,000-word minimum) regarding the intent and underlying conceptualization.

Final Examination

The final examination is oral and covers the intent and underlying conception of the student's comprehensive project. This examination is prepared and conducted by the student's graduate committee. Two copies of a sheet of 35mm slides of work in the exhibition, along with two copies of the 2,000 word minimum statement, must be presented to the department during the exhibition for permanent record.

The following classes will be scheduled subject to faculty availability, student enrollment, and program requirements.

Art

ART 700 **3 credits**
Seminar in Studio Practices
Studio practices directed toward the analysis of studio work. Fosters an open and conducive atmosphere for examination of media and concepts through constructive criticism. May be repeated to a maximum of 12 credits.

ART 710 **1-9 credits**
Graduate Studio
Individual problems in major studio area, with choice of medium. May be repeated with change of subject, maximum of 15 credits. Prerequisite: Graduate standing.

ART 720 **1-9 credits**
Graduate Projects
Individual problems in major studio area, with choice of medium. May be repeated with change of subject, maximum of 30 credits. Prerequisite: Graduate standing in art.

ART 721 **3 credits**
Graduate Faculty Studio
Individual problems in the studio area with regularly scheduled discussion sessions involving all department faculty. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in art.

ART 727 **3 credits**
Historiography
Surveying the variety of methods utilized by scholars of the humanities to study the visual arts in the Western world. Prerequisite: Graduate standing.

ART 737 **3 credits**

Theory and Criticism

Analyzes the various aesthetic theories of art in the Western world. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

ART 747 **1-3 credits**

Directed Readings

Directed readings in art history in a specific area agreed upon by the students and faculty prior to registration. May be repeated for a maximum of nine credits. Prerequisite: Graduate standing.

ART 777 **4 credits**

Graduate Exhibition

Culminates in a graduate exhibition presented by the candidate for the Master of Fine Arts degree. Prerequisite: Must be taken in final semester with show exhibition, graduate standing.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

ART 662	The History of Medieval Art
ART 663	History of Early Renaissance Art
ART 664	High Renaissance and Mannerist Art
ART 665	History of Northern Renaissance Art
ART 666	History of Renaissance and Baroque Architecture
ART 667	History of Baroque Art I
ART 668	History of Baroque Art II
ART 669	Art of Eighteenth Century Europe I
ART 670	Art of Eighteenth Century Europe II
ART 672	Nineteenth Century Art
ART 673	Twentieth Century Art
ART 674	History of American Art
ART 677	Art Since 1945
ART 680	The Art of China
ART 681	Art of Japan
ART 695	Special Topics in Art History

Film

Chair

Menendez, Francisco (1990), Professor; B.A., University of Puget Sound; M.F.A., California Institute of the Arts.

Graduate Coordinator

Clark, Sean (1999), Associate Professor; B.S., University of Missouri; M.F.A., University of Iowa.

Graduate Faculty

Wegner, Hart L. (1968), Professor; B.A., M.A., University of Utah; Ph.D., Harvard University.

The UNLV Department of Film offers a Master of Fine Arts degree in Screenwriting. This terminal film degree focuses specifically on the art and craft of writing for screen. This is in keeping with the narrative-driven curriculum of the Film Department as a whole. This M.F.A. professional training program presents superior academic and artistic standards for the candidates. They are challenged to elevate their talent and craft to levels of excellence to make for seamless transfers into careers in the entertainment industry. Students completing the three-year program will have a significant group of feature motion picture and television scripts that have been honed to the sharpest professional sensibility. In addition to faculty with professional experience, the students are exposed to a variety of guests who are working in the industry.

This new program is already establishing a basis for a strong tradition of quality education and a demanding writing experience. The student who has a passion for film and dedication to the discipline of writing is urged to contact the Department of Film.

Admission Requirements

Students are admitted in the fall term of each academic year. In addition to the general requirements for admission to the Graduate College, the following materials must be submitted.

1. A writing sample to the Graduate Coordinator. This sample should be a screenplay. A stage play or prose fiction will suffice if approved by the coordinator. The sample is needed to demonstrate narrative ability.
2. The names, addresses, and telephone numbers of two references.
3. Be interviewed, by telephone or in person, by the Graduate Coordinator.
Review of applications begins January 15.

Degree Requirements

Candidates for the Master of Fine Arts in Screenwriting take a minimum of 54 credits. The candidate is required to take a minimum 36 credit hours from the following list: FIS 722 Graduate Screenwriting (a total of six times); FIS 723 Ensemble Screenwriting; FIS 724 The Adaptation Screenplay; FIS 725 Writing for Assignment; FIS 726

Advanced Screenplay Analysis I; FIS 727 Advanced Screenplay Theory; FIS 728 Graduate Production; FIS 618 Writing for Television I and FIS 619 Writing for Television II. Elective classes will include additional graduate-level film courses as well as graduate-level dramatic literature or creative writing courses taught in other departments such as English, theatre or foreign languages.

Creative Project Requirement

During the three years of study, each screenwriting student will be expected to complete a minimum of four full-length feature motion picture screenplays and two television scripts. In practice, the output is actually closer to five screenplays and four television scripts. One screenplay will be selected to be the candidate's thesis script. It will undergo final revision as the work most indicative of the candidate's art and craft.

Final Examination

A two-hour oral examination will take place at the end of the course of study. This examination focuses on the student's work as a screenwriter (1 hour) and on films selected from the viewing list (1 hour). The viewing list, presented to the student during the course of study, contains motion pictures chosen by merit of their screenplays and the student must be analytically conversant about those movies.

Courses

Course work listed below is normally open only to matriculating advanced degree students in the Department of Film. Other students who may qualify under Graduate College or university regulations must receive prior consent to register from the Graduate Coordinator.

Film

FIS 720 3 credits **Advanced Cinematic Structure**

Analytical study of screenplay structure based on the filmed script. Select motion pictures established as subject films studied in piece and in detail as to how the structure of each scene works as itself and in the film as whole. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

FIS 721 3 credits **Collaboration and Preparation**

Practical exploration of the working process between the screenwriter, the director and the producer. Focuses moving the screenplay from "writers" draft to "production" draft in preparation for shooting. May be repeated for a maximum of six credits. Prerequisite: Graduate standing.

FIS 722 3 credits **Graduate Screenwriting**

Study of art and craft of writing a feature-length motion picture screenplay. Student completes a full-length (120 pages) screenplay or completes a thorough revision in workshop environment. May be repeated for a maximum of eighteen credits. Prerequisite: Consent of instructor.

FIS 723 3 credits **Ensemble Screenwriting**

Study of the art and craft of screenwriting in an ensemble. Students, as a group, complete four short screenplays and revisions. May be repeated for a maximum of six credits. Prerequisite: Consent of instructor.

FIS 724 3 credits **The Adaptation Screenplay**

Study of adapting a screenplay from another written medium by writing a full-length (120-page) screenplay in accepted industry format. The screenplay must have a contemporary setting but source material must be at least 100 years old and in public domain. May be repeated for a maximum of six credits. Prerequisite: Consent of instructor.

FIS 725 3 credits **Writing for Assignment**

Study and practice of editing, rewriting and revising the creative work of other screenwriters. Students analyze precedent of revising known screenplays, rewrite a full-length script as a group and commit an individual rewrite of a full-length script. May be repeated for a maximum of six credits. Prerequisite: Consent of instructor.

FIS 726 3 credits **Advanced Screenplay Analysis**

In-depth analytical study of a filmed script. Analysis ranges from the effects of a scripted visual technique to metaphor to personal and societal influences. Students write and present two analytical papers. Prerequisite: Consent of instructor.

FIS 727 3 credits **Advanced Screenplay Theory**

Analytical study of motion pictures with focus on the screenwriter's intent and agenda. Students conduct thorough research on screenwriters and provide analysis of the screenwriters' product. Students present and defend two papers combining this research and analysis. Prerequisite: Consent of instructor.

FIS 728 3 credits **Graduate Production**

Analytical approach to the professional production of a student's screenplay. Students chronicle all levels of involvement with the physical "shooting" of his, or her, script. May be repeated for a maximum of six credits. Prerequisite: Consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600-level normally required additional work.

FIS 615 Story Development
FIS 618 Writing for Television I
FIS 619 Writing for Television II

Music

Chair

Emerson, Isabelle (1979), Associate Professor; B.A., Barnard College; M.S.M., Union Theological Seminary; Ph.D., Columbia University.

Graduate Coordinator

Smith, Andrew (1995), Associate Professor; B.M., Hartt College of Music; M.M., Mannes College of Music; D.M.A., University of California, Santa Barbara.

Graduate Faculty

Anderson, Alfonse (1997), Associate Professor; B.A., M.M., Texas Southern University; D.M.A., University of Arizona.
Baley, Virko (1970), Professor; B.M., M.M., Los Angeles Conservatory of Music and Arts.
Caplan, Stephen (1989), Professor; B.M., Northwestern University; M.M., D.M.A., University of Michigan.
Fitzpatrick, Tod (2003), Assistant Professor; B.M., Chapman University; M.M., University of Southern California; D.M.A., University of Southern California.
Gronemeier, Dean (1989), Professor and Associate Dean; B.A., Northern Illinois University; M.M., D.M.A., University of Arizona; J.D., University of Nevada, Las Vegas.
Grossman, Jorge (2004), Assistant Professor; B.M. Faculdade Santa Marcelina; M.M., Florida International University; D.M.A., Boston University.
Hanlon, Kenneth M. (1970), Professor; B.M., M.M., D.M.A., Peabody Conservatory of Music of Johns Hopkins University.
Kimball, Carol A. (1972), Professor; B.S., New York University; M.A., Arizona State University; D.M.A., University of Arizona.
Loeb, David (2002), Assistant Professor; B.S., Westchester University; M.M., University of Wisconsin.
McKay, Janis (1995), Associate Professor; B.M., University of Georgia; M.M., University of Louisville; D.M.A., Ohio State University.
Seitz, Christine (2002), Assistant Professor; B.M., M.M., University of Wisconsin.
Soule, Richard L. (1974), Professor; B.M., Boston University; M.M., D.M.A., Peabody Conservatory of Johns Hopkins University.
Sturm, Marina (2004), Assistant Professor; Wisconsin Conservatory of Music; Institute de Hautes Etudes Musicales; M.M., Victoria University; D.M.A., State University of New York at Stony Brook.
Taranto, Cheryl (1996), Head Music Librarian; B.M., M.M., M.L.S., Ph.D., Louisiana State University.

The Department of Music offers firsthand experience through a myriad of venues including performing ensembles; excellent Master of Music degree programs in Applied Music, Composition/Theory, and Music Education; the newly approved Doctor of Musical Arts degree; and the department's performing faculty. Training in these programs can lead to positions in symphony orchestras, major hotel orchestras, opera apprenticeship programs, composing/arranging work, and teaching careers.

Students not admitted to graduate programs in Music may register for graduate courses only with permission from the instructor of the course and the appropriate program administrator.

Master of Music

Admission Requirements

In addition to submitting an application and transcripts of all college-level work to the Graduate College, students applying for admission into the program must present the following credentials:

1. An overall undergraduate grade point average of at least 2.75 or 3.00 in the last two years.
2. An undergraduate grade point average of at least 3.00 in music.
3. Two letters of recommendation from former instructors attesting that the student is capable of doing graduate work at an acceptable level of performance. These letters are to be sent to the Department of Music.
4. Official transcripts of all college-level work must also be sent to the department.

Additional Requirements

All prospective students may be required to perform an audition and/or be interviewed by the graduate faculty of the Department of Music. In addition, the materials listed below are also to be sent directly to the Department of Music.

Applied Music (Performance)

An undergraduate degree in Music, or equivalent, is required for admission to the program.

1. A tape of the senior undergraduate recital or the equivalent.
2. A 500-word essay defining career goals and explaining how graduate studies in music will advance the applicant toward these goals.

Composition/Theory

An undergraduate degree in Music, or equivalent, is required for admission to the program.

1. A portfolio of compositions including at least one work from three of the following categories: a) orchestra, band or chorus; b) solo instrument and piano or for solo piano; c) string quartet, brass quintet, woodwind quintet, or other small ensemble; d) set of songs for solo voice and piano; e) original composition scored for jazz ensemble. Additional works may be included.
2. A 500-word essay defining career goals and explaining how graduate studies in music will advance applicant toward these goals.

Music Education

An undergraduate degree in Music Education or the equivalent is required for admission to the program, as is a 500-word essay on the applicant's philosophy of music education.

Placement Examination

Prior to registration, all graduate students must take placement examinations in history, theory, and sight-singing. The student must pass history and theory placement examinations before registering for courses in these areas. The student must pass the sight-singing examination before

selecting the examination committee and before scheduling the graduate recital and the final comprehensive examinations.

Degree Requirements

The minimum number of credits required for the Master of Music degree varies with each major option. No more than eight hours of 600-level course work may be applied to the candidate's degree program. The individual requirements for each of the option areas are as follows:

Applied Music (Performance)	Graduate Credits
A. Applied Major Option	
Bibliography	3
Music History	6
Music Theory	3
Applied Music	8
Recital	2
Pedagogy and Literature	3
*Ensemble	2
Electives (with approval)	3
TOTAL	30
B. Accompanying Option	
Bibliography	3
Music History	6
Music Theory	3
Applied Music includes Two recitals, one with vocalists, one with instrumentalists	8
Pedagogy and Literature (vocal or instrumental)	3
Ensembles	2
Accompanying (MUS 613)	2
Electives (with approval)	3
TOTAL	30
C. Woodwind Major Option	
Major Instrument	8
**Secondary Instruments (4 credits each)	8
Bibliography	3
Music History	3
Music Theory	3
Recital	2
Pedagogy and Literature	6
*Ensemble	2
Electives (with approval)	3
TOTAL	38
D. Jazz Performance Option	
Applied Lessons	8
Recital	2
Ensembles (1 large, 1 small)	2
Bibliography	3
Jazz History	3
Jazz Keyboard	3
Jazz Pedagogy	3
Jazz Theory	3
Music History Elective	3
TOTAL	30

* Participation in one major ensemble and one chamber ensemble.

** To be selected based on the entrance audition in consultation with the advisor. Requirements for each secondary instrument may be satisfied by examination at the discretion of the department. Equivalent credits shall be taken on another woodwind instrument or as an elective.

Composition Theory	Credits
A. Composition/Theory Option	
Bibliography	3
Music History	6
Music Theory	6
Applied Music	4
Composition (private instruction)	8
Recital	2
Elective (with approval)	3
TOTAL	32
B. Jazz Composition/Theory Option	
Applied Lessons	4
Composition	8
Recital	2
Bibliography	3
Jazz History	3
Jazz Keyboard	3
Jazz Pedagogy	3
Jazz Theory	3
Music History Elective	3
TOTAL	32

Music Education

A. Music Education Option	
Bibliography	3
Music History	6
Music Theory	3
Music Education: MUS 751, 752, 771	9
Music Education elective	3
Electives (with approval to include Applied Music or Conducting)	9
TOTAL	33

Note: The maximum number of workshop credits is three.

B. Orff Schulwerk Option	
Bibliography	3
Music History	6
Music Theory	3
Music Education: MUS 752, 771	6
Orff Levels I-III: MUS 742, 743, 744	9
Electives (with approval to include Applied Music or Conducting)	6
TOTAL	33

All candidates for the Master of Music degree in Applied Music and Composition/Theory are required to take written and oral comprehensive examinations. Candidates for the Master of Music degree in Education are required to take a written comprehensive examination and may also be required to take an oral examination. Throughout work for the degree, the student must maintain a minimum GPA of 3.00, with no more than two grades of C (2.00), and no grade lower than B (3.00) in the major area of concentration. Performance majors must earn at least a B (3.00) in pedagogy and literature and in ensembles as well as lessons. A thesis is optional and may, with approval, be used in lieu of six credits in the student's program. Participation in large ensembles is required throughout the student's residency.

Doctor of Musical Arts Degree

The Doctor of Musical Arts degree represents the highest level of academic and musical achievement at UNLV. The program is designed for those students in the areas of voice, percussion and woodwinds, who wish to pursue careers in both performance and college-level teaching. The goal, therefore, is to provide students with intensive academic preparation and teaching of the type that will enable them to be effective pedagogues and otherwise function comfortably in an academic environment, without neglecting their continued development as performing artists.

Admission Requirements:

1. Master's degree in Music from a NASM accredited institution.
2. At least three letters of recommendation from faculty espousing the prospective student's abilities to succeed at the doctoral level academically, musically and professionally.
3. Statement of Purpose (500 words) written by the applicant. Applicants are expected to explain their interests and goals relevant to continued study at the doctoral level.
4. Successful performance audition.
5. Successful completion of entrance exams administered by the Department of Music.

Program Completion Requirements

At least 60 semester credits of approved course work beyond the master's level and completed as follows:

Performance Studies

Applied	16
(Jury to be performed at end of each semester of applied study unless a recital has been given)	
Recitals (3 total)	9
Lecture-recital	3
Document	2
Ensembles	2
Performance seminars	0
Total Performance Studies:	32

Core Seminars (7 credits)

Research*	3
Theory	3
Musician in Higher Education	1

Course Work

History and literature	9
(courses as specified by advisor)	
Pedagogy (as required by area of specialization, may include theory)**	3-9
Electives	
(as required by area of specialization)**	3-9
Total Course Work	21

Total Seminars and Course Work:	28
Degree Total (beyond Master's):	60

* Prerequisite is master's level bibliography course.

** Credits for Pedagogy and Electives must total 12. Percussion Studies requires nine credits of Pedagogy.

Program Summary for D. M.A.

Performance of the first recital: The candidate must successfully complete one jury examination in order to perform the first recital. The second and third recitals will be scheduled with the approval of the candidate's advisor.

Grade Point Average Requirements

A total of 60 credit hours beyond the master's degree is required with a GPA of 3.00. Courses with a grade lower than a B (3.00) *may not* be used toward the degree. If a grade of lower than a B (i.e., B- or below) is received, the course must be retaken. If the student's cumulative GPA falls below 3.00, that student may be removed from the program.

Foreign Language Requirement: Candidates must demonstrate a working knowledge of one foreign language pertinent to a candidate's particular discipline. This requirement may be satisfied by successful completion of a foreign language examination. French, German, and Italian qualify for all D.M.A. areas, and Spanish qualifies for the D.M.A. in Percussion. This requirement must be completed prior to the candidate's application for graduation.

Examination Committee: The candidate's examination committee shall be composed of four faculty members of the Department of Music, and one faculty member from outside the Department of Music. The committee must include at least one music faculty member outside the student's particular area of concentration. The committee is to be formed during the semester in which he or she completes thirty credits towards the D.M.A. degree.

Written Examination: The written examination shall examine the candidate's particular area of concentration and shall be scheduled for the semester in which the candidate is completing all course work. This examination shall be scheduled approximately one week prior to the candidate's first oral examination.

Oral Examinations: There are two oral examinations. The first examines the candidate's particular area of concentration and is to be scheduled for the semester in which the candidate is finishing all course work. This examination will be scheduled approximately one week after the candidate's written examination. The second is a defense of the candidate's lecture-recital document and is to be scheduled for the semester in which the candidate satisfies the lecture-recital requirement.

Lecture-Recital and Document: An abstract of the candidate's proposed document and an outline of the candidate's proposed lecture must be presented to the examination committee for approval no later than the execution of the first oral examination. The completed document must be no fewer than 50 pages in length, all inclusive. The lecture-recital may not be executed prior to completion of all required textbook courses. Textbook courses are all courses other than musical ensembles or applied lessons.

Residency: All D.M.A. candidates must complete one year of residency. One year of residency is defined as successive fall-spring semesters registered for full-time status of at least seven graduate credits that apply towards the candidate's degree.

Time Allowed for Completion of Degree: Eight years, in accord with UNLV Graduate College guidelines for completion of doctoral degrees.

Music

MUS 702 **2 credits**
Master's Remedial Ear Training

Designed to develop the student's ear training skills to the level necessary to pass the Master of Music Sight-Singing examination. Not eligible for Master's credit. S/F grading only.

MUS 703 **3 credits**
Jazz Theory

Analytical and written studies covering advanced jazz harmony as it relates to specific style developments in jazz history from the bebop period to present day. Prerequisites: Graduate standing, undergraduate course work in jazz theory or consent of instructor.

MUS 704 **3 credits**
D.M.A. Remedial Music Theory

Specifically designed to remediate deficiencies revealed in the D.M.A. theory entrance examination. Harmony, counterpoint, and form reviewed according to students' needs.

MUS 705 **3 credits**
Techniques of the Romantic Period

Analytical and written studies covering compositional practices of the nineteenth and early twentieth centuries.

MUS 706 **3 credits**
Twentieth-Century Techniques

Analytical and written studies covering compositional practices from Impressionism to the present day.

MUS 707 **3 credits**
Analysis in Relation to Performance

Application of analytical techniques to the problems of performance, from both aural and visual approaches.

MUS 708 **3 credits**
Aspects of Musical Style

Identification and study of the theoretical aspects of musical style through the examination of representative works from music literature. Prerequisites: MUS 304, 407.

MUS 711 **3 credits**
Jazz Keyboard

Study of advanced keyboard techniques as they apply to jazz composition. Prerequisites: Graduate standing; undergraduate course work in jazz keyboard or consent of instructor.

MUS 717 **3 credits**
Marching Band Techniques

Techniques of charting field movements and arranging musical selections for the marching band.

MUS 718 **3-9 credits**
Graduate Seminars in Voice

To study representative vocal repertoire from major song composers of a) German lieder, b) French melodie, and c) Italian song through performance, discussion, reading, and listening. Study of repertoire in each national area. Encompasses origins and development of the genre, and interpretive concerns relating to text, diction and composers' styles. Prerequisite: Doctoral standing.

MUS 719 **1 credits**
Teaching Music in Higher Education

Examination of the skills, procedures, and materials needed to obtain and retain a position as an applied music faculty member at a college or university. Prerequisite: Doctoral standing.

MUS 720 A&B **1-3 credits**
Instrumental Music Reading and Conducting Workshop

Primarily for the purpose of reading large ensemble music with additional emphasis on conducting techniques and pedagogy. a) Orchestra. b) Band.

MUS 722 **3 credits**
Instrumental Conducting Seminar

Analysis of individual conducting problems with emphasis on orchestral and contemporary music.

MUS 723 **Advanced Choral Conducting** **3 credits**

Preparation of selected choral scores with emphasis on style and interpretation. Prerequisites: MUS 422 and MUS 425 or equivalent.

MUS 724 **Master Class in Singer's Diction** **3 credits**

Phonetics and diction for singers in English, Italian, French, German, and Spanish.

MUS 725 **Advanced Choral Literature** **3 credits**

Form and style in choral music of the Renaissance and Baroque periods to the present.

MUS 726 **Survey of Solo Repertoire** **3 credits**

Examination of solo literature available for performance in the following media. a) String. b) Woodwind. c) Brass. d) Percussion. e) Piano. f) Vocal. g) Guitar.

MUS 727 **Survey of Ensemble Repertoire** **3 credits**

Examination of ensemble literature available for performance in the following media. a) String. b) Woodwind. c) Brass. d) Percussion. e) Piano. f) Vocal. g) Band.

MUS 728 **Percussion Literature and Pedagogy** **3 credits**

Study of the origins and developments and the pedagogical techniques of standard percussion instruments, including general concert percussion instruments, keyboard percussion instruments, and drum set. Prerequisite: Graduate standing or consent of instructor.

MUS 729 **Jazz Pedagogy** **3 credits**

Examination of the basic materials, systems, and philosophies related to jazz education. Prerequisite: Graduate standing or consent of instructor.

MUS 742 **Orff Certification Level I** **3 credits**

Development of a sequential teaching curriculum utilizing chants, rhymes, poetry, singing, movement, instrumentation, and soprano recorder. Prerequisite: Undergraduate major in music education or consent of instructor.

MUS 743 **Orff Certification Level II** **3 credits**

Extension of a sequential teaching curriculum utilizing major and minor modes, additional harmonic techniques, complex rhythms, expanded elemental forms, and alto recorder. Prerequisite: Completion of Orff Level I.

MUS 744 **Orff Certification Level III** **3 credits**

Extension of a sequential teaching curriculum utilizing pentatonic and diatonic scales, lydian and mixolydian modes, descant, parallelism, irregular meters, changing meters, and off-beat accents. Prerequisite: Completion of Orff Level II.

MUS 745 **Orff Schulwerk for the Classroom Teacher** **3 credits**

Utilizes singing, creative movement, speech, body percussion, musical drama, and instruments. Provides opportunities to explore, plan, and develop units of musical activities which coordinate with public school music programs. Helps teachers improve individual music skills while enhancing classroom programs.

MUS 746 **Master Class in Vocal Pedagogy** **3 credits**

Techniques for training and retraining voices. Study of the singer's vocal production mechanism.

MUS 747 **Instrumental Music Pedagogy** **3 credits**

Rationale and procedures for developing a logical and appropriate course of study for individual instruction of instrumental music. a) Piano. b) Brass. c) Woodwind. d) String. e) Guitar. f) Band.

MUS 749 **General Music Classes in the Junior and Senior High School** **3 credits**

Content and organization of general music, music theory, and music history classes in junior and senior high school programs. Techniques and materials for classes not performance oriented.

MUS 751 **Studies in Music Curricula** **3 credits**

Scope and sequence of musical experiences in the school music program including new techniques, trends, and developments in music education influencing change in curricula.

MUS 752 **Foundations and Principles of Music Education** **3 credits**

Examination of the historical, psychological, and philosophical foundations of music education and teaching principles derived from these foundations.

MUS 754 **Advanced Studies in Elementary School Music** **3 credits**

Organization and content of the general vocal music program in the elementary school (K-6). For experienced teachers.

MUS 756 **3 credits**
Percussion Ensemble in the High School Curriculum

Focuses on elements needed to develop and maintain high school percussion ensembles. Primary attention devoted to conducting and performing techniques, and study of appropriate literature. Secondary attention devoted to general methods and maintenance of percussion section along with basic considerations for assigning parts. Prerequisite: Consent of instructor.

MUS 760 **2-4 credits**
Secondary Applied Music for Graduate Students

Individual instruction on instruments or voice other than the student's area of specialization. a) Baritone. b) Bassoon. c) Cello. d) Clarinet. e) Flute. f) Horn. g) Oboe. i) Piano. j) Saxophone. k) String Bass. l) Trombone. m) Trumpet. n) Tuba. o) Viola. p) Violin. q) Voice. r) Guitar. s) Percussion. t) Organ. u) Harp.

MUS 761-762 **2-4 credits**
Graduate Applied Music for Performance Majors

Individual instruction on instruments or voice. Audition and jury examination required. a) Baritone. b) Bassoon. c) Cello. d) Clarinet. e) Flute. f) Horn. g) Oboe. i) Piano. j) Saxophone. k) String Bass. l) Trombone. m) Trumpet. n) Tuba. o) Viola. p) Violin. q) Voice. r) Guitar. s) Percussion. t) Organ. u) Harp.

MUS 764 **2-4 credits**
Doctoral Applied Music

Individual instruction on instrument or voice. Audition required. Jury examination required. b) Bassoon. d) Clarinet. e) Flute. d) Oboe. e) Saxophone. q) Voice. s) Percussion.

MUS 765 **2-4 credits**
Private Theory and Composition

Offerings for individual instruction include: a) Composition and Seminar. b) Orchestration. c) Jazz Arranging and Composition. f) Form and Analysis. g) Counterpoint. j) Harmony. May be repeated for credit. Prerequisite: Consent of instructor.

MUS 766 **2-4 credits**
Private Graduate Conducting

Along with the individual private lesson, candidates must attend a weekly, one-hour private conducting seminar. a) Instrumental. b) Vocal.

MUS 767-768 **2-4 credits**
Graduate Applied Music for Non-Performance Majors

Individual instruction on instruments or voice. Audition and jury examination required. For students in music education or theory and composition curricula. a) Baritone. b) Bassoon. c) Cello. d) Clarinet. e) Flute. f) Horn. g) Oboe. i) Piano. j) Saxophone. k) String Bass. l) Trombone. m) Trumpet. n) Tuba. o) Viola. p) Violin. q) Voice. r) Guitar. s) Percussion. t) Organ. u) Harp.

MUS 767Q **1-4 credits**
Graduate Applied Voice for Non-Performance Majors
Voice. One credit available for M.F.A. acting candidates only.

MUS 769 **2-4 credits**
Private Music History and Pedagogy and Literature

Individual instruction in special areas of music history or pedagogy and literature. a) History. b) Pedagogy and literature. Each section may be repeated to a maximum of four credits. Prerequisite: Consent of instructor.

MUS 770 **1-6 credits**
Seminar: Special Topics

Explores a specific aspect of music. May be repeated to a maximum of six credits for master's candidates and nine credits for doctoral candidates.

MUS 771 **3 credits**
Research in Music Education

Investigation of methods of research, procedures for reporting research, and examination of research literature in music education.

MUS 772 **3 credits**
Research Project in Music Education

Design and completion of research study using descriptive or experimental research skills in a clinical or educational setting, or using historical research techniques. Prerequisite: MUS 771.

MUS 773 **3 credits**
Doctoral Research Seminar

Study of research methodologies appropriate to the various disciplines of music history: biography and history, ethnomusicology, performance practice. Study of each methodology complemented by practical applications such as oral reports, research papers, or lecture-recitals. Prerequisites: Master's degree in music; MUS 790 or equivalent.

MUS 774 **3 credits**
D.M.A. Seminar in Music Theory

Special topics in music theory including investigations of the underlying theoretical techniques of various composers' styles. Investigations will include use of rhythm, harmony, counterpoint, form, instrumentation, as well as other elements of musical style. Prerequisite: D.M.A. candidate.

MUS 777 **1-3 credits**
Doctoral Seminars in Percussion

Candidate chooses three percussion topics to research at five-week intervals. Examines the topic as to its history, pedagogy, and literature. Formal presentation after each five-week period featuring the research with emphasis on specific area within the general topic. Prerequisites: Master's degree in music and consent of instructor.

MUS 780 **Thesis** **2-6 credits**

May be repeated but only six credits will be applied to the student's program. S/F grading only.

MUS 783 **Jazz History Seminar** **3 credits**

In-depth study of jazz history with special focus on student research and presentations. Prerequisites: Graduate standing; undergraduate course work in jazz history or consent of instructor.

MUS 784 **Chamber Music** **3 credits**

Study of chamber music from 1650 to the present. Analysis of representative works from different style periods and examination of relationship between instrumental technique and musical style. Prerequisites: Graduate standing, or MUS 320 and MUS 321 and consent of instructor.

MUS 785 **The Symphony** **3 credits**

Study of the origins and development of the symphony from 1750 to the present. Analysis of representative works from different style periods and emphasis on relationships of development of orchestra and formal development of genre. Prerequisites: Graduate standing, or MUS 320 and MUS 321 and consent of instructor.

MUS 786A **The Operas of Mozart** **3 credits**

Detailed study of the operas of W. A. Mozart, analysis of style, vocal writing, of his librettists, and the influences on the formation of his style. Prerequisite: Graduate standing in music.

MUS 786B **The Operas of Verdi** **3 credits**

Detailed study of the operas of Giuseppe Verdi, analysis of style, vocal writing, his librettists, and influences that led to formation of his style. Prerequisite: Graduate standing in music.

MUS 786C **Puccini and the Verismo** **3 credits**

Surveys and discusses the operatic works of Giacomo Puccini and his importance to the historical development of opera. Discussion of the period in Italian Opera known as Verismo with emphasis on composers that help to create this musical form. Prerequisite: Graduate standing in music.

MUS 786D **American Opera Seminar** **3 credits**

In-depth survey of American operas in the twentieth century, with emphasis on composer, representative works, style and content. Prerequisite: Graduate standing in music.

MUS 787 **History of Musical Instruments** **3 credits**

History of musical instruments from the primitive to the modern era. Focuses on mechanical and acoustical developments of musical instruments and their influence and impact on composers and performers. Prerequisites: MUS 320, 321 or consent of instructor.

MUS 788 **History of Soviet Music: 1917-1991** **3 credits**

History of music of the fifteen constituted Soviet republics with special emphasis on Russian, Ukrainian, Estonian, Lithuanian, Latvian, Georgian, Armenian, and Byelorussian music. Survey of music literature within the general context of cultural development. Prerequisite: Two semesters of undergraduate music history or consent of instructor.

MUS 789 **The Art Song** **3 credits**

Study of solo song from its beginning to the present day.

MUS 790 **Bibliography** **3 credits**

Study of the bibliography of music and methods of research.

MUS 791 **The Solo Concerto** **3 credits**

Study of the historical development of the solo concerto and an analysis of representative works from all periods.

MUS 792 **History of Opera** **3 credits**

Study of the historical development of opera from Monteverdi to the present with emphasis on representative works and composers.

MUS 793 **Medieval and Renaissance Music** **3 credits**

Study of the evolution of European music from antiquity through the end of the sixteenth century.

MUS 794 **Music of the Baroque Period** **3 credits**

Examination of the styles and forms of the seventeenth and early eighteenth centuries.

MUS 795 **Classical and Early Nineteenth-Century Music** **3 credits**

Examination of the styles and forms of the period 1750 to 1825.

MUS 796 **Music of the Romantic Period** **3 credits**

Examination of the styles and forms from 1815 through the early twentieth century.

MUS 797 **Music of the Twentieth Century** **3 credits**

Examination of the styles and forms from Impressionism to the present day.

MUS 798A **2 credits**

Recital–Master’s Level

Presentation of a full recital. May be repeated for a maximum of twelve credits. Prerequisites: Consent of faculty and concurrent enrollment in MUS 762.

MUS 798B **3 credits**

Recital-Doctoral Level

Presentation of a full recital at the doctoral level. May be repeated for a maximum of fifteen credits. Prerequisite: Consent of the examination committee.

MUS 799 **1-3 credits**

Independent Study

Investigation of specific aspect of music under supervision of a faculty member. Students must present proposals, including advisors and numbers of credits, no later than one week before registration, a) History/Literature. b) Theory/Composition. c) Music Education. d) Pedagogy and Literature. May be repeated to a maximum of six credits for master’s candidates and nine credits for doctoral. Prerequisite: Consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

- MUS 610 Counterpoint
- MUS 629 Interpretation of the German Lied
- MUS 630 French Melodie
- MUS 690 Music Internship
- MUSE 601 Concert Choir
- MUSE 602 Symphonic Choir
- MUSE 603 Chamber
- MUSE 604 Opera Workshop
- MUSE 605 Women’s Chorus
- MUSE 606 Varsity Men’s Glee Club
- MUSE 607 Master Chorale
- MUSE 608 Concert Singers
- MUSE 611 Concert Band
- MUSE 612 Symphonic Band
- MUSE 613 Wind Orchestra
- MUSE 614 Wind Ensemble
- MUSE 615 Marching Band
- MUSE 616 Pep Band
- MUSE 618 Community Concert Band
- MUSE 619 Brass Band
- MUSE 620 Symphonic Winds
- MUSE 621 Symphony Orchestra
- MUSE 622 Chamber Orchestra
- MUSE 631 Jazz Ensemble
- MUSE 633 Jazz Combo
- MUSE 634 Jazz Guitar Ensemble
- MUSE 635 Jazz Vocal Ensemble
- MUSE 636 Jazz Funk Ensemble
- MUSE 641 Woodwind Ensemble
- MUSE 642 Woodwind Quintet
- MUSE 643 Flute Ensemble

- MUSE 644 Clarinet Choir
- MUSE 645 Saxophone Ensemble
- MUSE 646 Brass Ensemble
- MUSE 647 Brass Quintet
- MUSE 648 Trumpet Choir
- MUSE 649 Trombone Choir
- MUSE 651 String Chamber Ensemble
- MUSE 653 Guitar Ensemble
- MUSE 661 Percussion Ensemble
- MUSE 662 Marimba Band
- MUSE 663 African Ensemble
- MUSE 664 Percussion and Dance
- MUSE 665 Steel Drum Band
- MUSE 671 Piano Ensemble
- MUSE 672 Accompanying
- MUSE 680 Opera Production
- MUSE 690 Special Ensemble
- MUSE 691 Chamber Music for Non Majors
- MUSE 692 Special Instrumental Ensemble
- MUSE 693 Special Vocal Ensemble
- MUSE 694 Collegium
- MUSE 695 Chamber Players

Theatre

Chair

O'Connor, Charles (2003), Professor, B.A., California State University-Northridge; M.F.A., University of Southern California.

Graduate Coordinator

Davis, KC (2002), Assistant Professor; B.A., University of Utah; M.F.A., University of Washington.

Graduate Faculty

Aldridge, Joe (1989) Associate Professor; B.A., Texas Tech University; M.A., University of Nevada, Las Vegas.

Benedetti, Robert L. (2005); Associate Professor, B.Sc., M.A., Ph.D., Northwestern University.

Brewer, Robert (1989), Professor; B.F.A., University of Illinois; M.F.A., Pennsylvania State University.

Bynum, Joe Nathan (1999), Associate Professor; B.S., Bowie State College; M.F.A., Southern Illinois University.

Casale, Glenn (2003), Assistant Professor, B.A., Marist College; M.A., University of Nevada, Las Vegas.

Fiala, Jeffrey (1990), Professor; B.S., M.F.A., University of Wisconsin.

Frayer, Brackley (1995), Associate Professor; B.A., New England College; M.F.A., Yale School of Drama.

Hubbard, Philip J. (1999), Assistant Professor; B.A., University of California, Riverside; M.F.A., Southern Methodist University.

Koep, Jeffrey (1989), Professor and Dean, College of Fine Arts; B.A., Moorhead State University; M.A., Bowling Green State University; Ph.D., Washington State University.

Lugering, Michael (1991), Associate Professor; B.S., Florida State University; M.F.A., University of Utah.

McDonough, Ann (1990), Professor; B.A., College of St. Catherine; M.A., Ph.D., University of Minnesota.

Ryerson, Judith A. (2005), Associate Professor; B.F.A., West Virginia University; M.F.A., University of Utah.

Sumpter, Shannon (1999), Assistant Professor; B.F.A., Adelphi University; M.F.A., Yale School of Drama.

Professors Emeriti

Burgan, Robert N. (1972), Emeritus Professor; B.A., University of Nevada, Las Vegas, M.F.A., Ohio University.

Crawford, Jerry L. (1962-1994), Emeritus Professor; B.F.A., Drake University; M.A., Stanford University; Ph.D., University of Iowa.

Harris, Paul C. (1959-1989), Emeritus Professor; B.A., University of Colorado; M.A., Ph.D., Stanford University.

Master of Arts

Admission Requirements

Students seeking an M.A. degree are admitted for matriculation in the fall or spring semester of the academic year. In addition to the general requirements for admission to the Graduate College, applicants must submit the following to the Department of Theatre:

1. An official transcript from all postsecondary institutions attended, showing an undergraduate degree in theatre and the date awarded. (An acceptable alternative undergraduate major coupled with satisfactory practical experience in theatre may be deemed equivalent to an undergraduate major in theatre.)
2. A written statement (500 words or less) of the applicant's purpose in pursuing graduate study.
3. Two letters of recommendation sent by former instructors, employers, or other professionals who can evaluate the applicant's potential to complete graduate study.

These materials may be sent to the following address:

Department of Theatre
Attn: Graduate Coordinator
University of Nevada, Las Vegas
4505 Maryland Parkway
Box 455036
Las Vegas, NV 89154-5036

Note: A writing sample and/or a personal interview may also be requested by the department's Graduate Coordinator.

Program of Study

A minimum of 31 semester hours of credit in a program approved by the student's advisor and examination committee. The 31 credits will include:

THTR 681 Theatre History I	3 credits
THTR 682 Theatre History II	3 credits
THTR 701 Research in Theatre & Drama	3 credits
THTR 702 Graduate Seminar	4 credits
THTR 798 Thesis	6 credits
Electives	12 credits
Total	31 credits

THTR 681, 682 and 701 should be taken in the first two semesters of study. THTR 798 should be taken over the course of at least two semesters with a minimum of two credits hours in the student's final semester of study.

Required reading for M.A. candidates

A reading list will be given to each student upon entering the program. It contains major works in theatre history, performance theory, and dramatic criticism and play texts. It is expected that M.A. students will have read everything on the list and be prepared to answer questions of comprehension as part of their final examination.

Thesis

A thesis topic is proposed by the student and approved by the examination committee. The M.A. thesis should be an original contribution of knowledge about a suitable dramatic or theatrical subject, no less than fifty pages in length. In matters of form and style, the student should follow the procedures set forth by the Graduate College in this catalog and in its Thesis and Dissertation Manual. A minimum of six thesis credits is required in the degree program.

Examinations

Students enrolled in the M.A. program will take a written diagnostic examination at the beginning of their first semester. Additionally, M.A. candidates will take a written comprehensive examination one week prior to their oral examination. The first half of the oral examination will be focused on defense of thesis; the second half will be based upon the Graduate Reading List, the curricular content represented in the student's individual course of study, and the results of their comprehensive examination.

Master of Fine Arts

The Master of Fine Arts is a three-year program offering advanced concentrations in Design/Technology, Directing, Performance, Playwriting, and Stage Management. Actors, directors, playwrights, designers, stage managers, and technicians receive comprehensive and specialized training in preparation for careers in the professional theatre. While deeply committed to the individual theatre artist, the program fosters and encourages an integrated and collaborative approach to theatre. In each semester of training, graduate students share a two-credit graduate seminar committed to progressive and practical exploration of the *essential theatre*.

The Nevada Conservatory Theatre

In 2001 the faculty of the Department of Theatre launched a five-year plan toward the establishment of the *Nevada Conservatory Theatre*. The *Nevada Conservatory Theatre* engages national and international theatre professionals in all disciplines to work alongside the most advanced students from the UNLV Department of Theatre. It is a leading theatre in Las Vegas and southern Nevada. It enriches, strengthens, and challenges the cultural and artistic life of the city and strives to be the state's premier theatre. It seeks the most advanced level of artistic achievement and to become a renowned regional theatre in America.

Admission Requirements

In addition to the general requirements for admission to the Graduate College, applicants must submit to the Department of Theatre:

1. An official transcript from all postsecondary institutions attended, showing an undergraduate degree in theatre and the date awarded. (An acceptable alternative undergraduate major coupled with satisfactory practical experience in theatre may be deemed equivalent to an undergraduate major in theatre.) M.F.A. candidates

deemed to have deficiencies in their training may be required to take specific remedial course work. Students with deficiencies in theatre history will be required to take THTR 681 and THTR 682 (Theater History I and II). Remedial course work may not be counted toward the degree requirements.

2. A written statement (500 words or less) of the applicant's purpose in pursuing graduate study.
3. Two letters of recommendation sent by former instructors, employers, or other professionals who can evaluate the applicant's potential to complete graduate study.

These materials, *in addition to those required by the individual concentrations*, may be sent to the following address:

Department of Theatre
Attn: Graduate Coordinator
University of Nevada, Las Vegas
4505 Maryland Parkway
Box 455036
Las Vegas, NV 89154-5036

Required reading for M.F.A. candidates

A reading list will be given to each student upon entering the program. It contains major works in theatre history, performance theory, dramatic criticism and approximately one hundred play texts. It is expected that graduate students will read everything on the list and be prepared to answer questions of comprehension as part of their final examination.

Advancement to Candidacy

The candidacy of all first-year M.F.A. students is provisional. Upon completion of the first year of study, the faculty in each area formally review their students' academic and artistic progress. If progress is deemed satisfactory, a student is advanced to M.F.A. candidacy. After advancement to candidacy, the student forms an examination committee comprised of four graduate faculty, three to be selected from the Department of Theatre and one representative from another department or college.

Termination of Candidacy

The faculty in each area of study periodically reviews the candidate's progress. Termination of candidacy is determined by the faculty in consultation with the student's advisor, the examination committee and the Graduate Coordinator.

Final Examination

All M.F.A. candidates will complete a two-hour oral examination at the end of their course of study. The first hour will focus on the student's course of study and the intent, purpose, conceptualization and realization of the student's creative project(s). The second hour will focus on the graduate reading list.

Design/Technology

Additional admission requirement

In addition to general materials requested by the Department of Theatre (see above), please submit a portfolio of representative work.

Program of Study

A minimum of 72 semester hours in a program approved by the student's advisor and examination committee. A representative degree program might include:

THTR 701 Research in Theatre & Drama	3 credits
THTR 702 Graduate Seminar	10 credits
THTR 705 Collaborative Process	3 credits
THTR 748 Architecture & Apparatus	3 credits
THTR 749 CAD for the Theatre	
or	
ART 710 Graduate Studio	3 credits
THTR 797 Creative Project	7 credits
Design/Technology Studio Courses	24 credits
Electives	19 credits
Total	72 credits

Directing

Additional admission requirements

In addition to general materials requested by the Department of Theatre (see above), please submit a directorial analysis of a play chosen from the following list:

Othello (Shakespeare)

Tartuffe (Moliere)

She Stoops to Conquer (Goldsmith)

A Doll's House (Ibsen)

Long Day's Journey Into Night (O'Neill)

A Streetcar Named Desire (Williams)

All My Sons (Miller)

Glengarry Glen Ross (Mamet)

Take Me Out (Greenberg)

The Heidi Chronicles (Wasserstein)

Fences (Wilson)

Lips Together Teeth Apart (McNally)

Wit (Edson)

The Goat (Albee)

The analysis should not exceed five double-spaced typewritten pages and should include:

1. A brief statement of the director's reason for selecting this play.
2. A single sentence summary of the plot.
3. A single sentence expressing the essence of the play in a metaphor.
4. A simple description of the theatrical style the director is contemplating. (This may best be achieved by comparing the production to other well-known works.)
5. A selected, annotated bibliography of historical, social, political or aesthetic research.

6. A brief discussion of time and location of the action. If the director intends to reset the action to a locale or time not indicated in the script, there must be a clear description and justification of that choice.
7. Three color copies of visual images you would submit to your designers as a point of departure for your collaboration.

All directing students are required to interview with members of the directing faculty. Interviews will be arranged after required materials have been received.

The M.F.A. Directing Program has a three-year admission cycle.

Program of Study

A minimum of 72 semester hours in a program approved by the student's advisor and examination committee. A representative degree program might include:

THTR 702 Graduate Seminar	8 credits
THTR 705 Collaborative Process	3 credits
THTR 707 Play Structure & Analysis	3 credits
THTR 719 Dramaturgy	3 credits
THTR 725 Directing Studio	12 credits
THTR 727 Scenic Design Studio I	3 credits
THTR 736 Stage Management I	3 credits
THTR 741 Costume Design Studio	3 credits
THTR 745 Lighting Design Studio	3 credits
THTR 771 Acting Studio	8 credits
THTR 773 Scene Study	12 credits
THTR 797 Creative Project	3 credits
Electives	8 credits
Total	72 credits

Performance

Additional admission requirements

In addition to general materials requested by the Department of Theatre (see above), students must audition either in person or through submission of a VHS tape (audition tapes cannot be returned). The audition should contain the following:

1. Two contrasting selections, one of which must be Shakespeare. The total audition should not exceed four minutes in length.
2. A song selected from a Broadway musical not to exceed one minute in length. A CD or cassette recording of your accompaniment is recommended as accompaniment cannot be provided.

The M.F.A. in Performance Program admits a new class every three years.

Program of Study

A minimum of 72 semester hours in a program approved by the student's advisor and examination committee. In addition to required course work, graduate students in performance must audition for all productions affiliated with the Nevada Conservatory Theatre and the University Theatre Season. The degree program might include:

THTR 702 Graduate Seminar	10 credits
THTR 763 Audition Technique	2 credits
THTR 764 Dialects for the Stage	2 credits
MUS 767Q Singing/Voice	6 credits
THTR 771 Acting Studio	12 credits
THTR 773 Scene Study	12 credits
THTR 775 Voice & Body Studio	10 credits
THTR 777 Movement for the Actor	6 credits
THTR 779 Speech for the Actor	6 credits
THTR 781 Dance for the Actor	6 credits
Total	72 credits

Playwriting

Additional admission requirement

In addition to general materials requested by the Department of Theatre (see above), submit two original plays, including at least one full-length play, and a one page statement of personal aesthetics. Materials cannot be returned.

Program of Study

A minimum of 72 semester hours in a program approved by the student's advisor and examination committee. A representative degree program might include:

THTR 701 Research in Theatre & Drama	3 credits
THTR 702 Graduate Seminar	10 credits
THTR 707 Play Structure & Analysis	3 credits
THTR 711 Playwriting Master Class	12 credits
THTR 713 Playwriting: The One Act	3 credits
THTR 714 Playwriting: The Full Length	3 credits
THTR 716 Playwrights Lab	3 credits
THTR 717 Playwrights Tutorial	3 credits
THTR 719 Dramaturgy	3 credits
THTR 720 Playwrights Workshop	5 credits
THTR 726 Problems in Directing	3 credits
THTR 796 Internship	3 credits
THTR 797 Creative Project	6 credits
Electives	12 credits
Total	72 credits

Stage Management

Additional admission requirement

In addition to general materials requested by the Department of Theatre (see above), submit several pages from a sample prompt script (cannot be returned). An interview with Stage Management faculty will be scheduled after application materials have been received.

Program of Study

A minimum of 72 semester hours in a program approved by the student's advisor and examination committee. A representative degree program might include:

THTR 621 Entertainment & Fine Art Law I, II	6 credits
THTR 702 Graduate Seminar	10 credits
THTR 725 Directing Studio I	3 credits
THTR 727 Scenic Design Studio I	3 credits
THTR 732 Technical Direction Studio	3 credits
THTR 736 Stage Management I	8 credits
THTR 737 Stage Management II	3 credits
THTR 739 Theatre Management	3 credits
THTR 740 Production Management	3 credits
THTR 741 Costume Design Studio I	3 credits
THTR 745 Lighting Design Studio I	3 credits
THTR 749 CAD for the Theatre	3 credits
BUS 745 Human Dynamics & Organization	3 credits
THTR 797 Creative Project	3 credits
Electives	15 credits
Total	72 credits

Theatre

THTR 701 3 credits

Research in Theatre and Drama

Graduate research methodology, research reporting and research/creative thesis document preparation.

THTR 702 2 credits

Graduate Seminar

Interdisciplinary course in history, theory, criticism, dramaturgy, aesthetics and technique. Through selected readings, lectures, discussions and collaborative projects, actors, directors, designers, playwrights, stage managers and theatre scholars explore the *essential theatre*. Topics rotate each semester. Course required for all M.A. and M.F.A. students. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

THTR 703 3 credits

Collaborative Process

Explores the working relationships between designer, director, and technician in the process of play production. May be repeated for a maximum of six credits.

THTR 704 **Oral History Theatre** **3 credits**

Focuses on the study of the development, structure and performance techniques of oral history theatre. Methods presented along with guidelines for adapting techniques to a variety of age groups.

THTR 707 **Form, Style and Structure** **3 credits**

Study of the theatre text, classical to modern, explicating form, style and structure.

THTR 711 **Playwrights Master Class** **1-4 credits**

Advanced writing class for second and third year playwrights. Prerequisite: Consent of instructor.

THTR 713 **Playwriting: The One-Act Play** **3 credits**

Practical course in the writing of shorter dramatic forms, focusing on craft, structure and technique. Prerequisite: Consent of instructor.

THTR 714 **Playwriting: The Full Length Play** **3 credits**

Practical course in the writing of long dramatic forms, focusing on craft, structure and technique. Prerequisite: Consent of instructor.

THTR 715 **Playwriting: Adaptation** **3 credits**

Study and writing workshop of adaptations for the stage of non-dramatic sources and adaptations of plays from earlier historical periods. Prerequisite: Consent of instructor.

THTR 716 **Playwrights Laboratory** **3 credits**

Explores the collaborative role of the playwright during the rehearsal process of a new play with actors, directors, and dramaturg. Prerequisite: Consent of instructor.

THTR 717 **Playwrights Tutorial** **1-4 credits**

Meetings with individual members of the faculty and with guest artists for discussion of successive drafts of work in progress. Prerequisite: Consent of instructor.

THTR 719 **Dramaturgy** **3 credit**

Overview of the history, form and function of dramaturgy. Provides active experience in dramaturgy, on a variety of drama from the classic play to new works. Collaborative relationships among director, playwright, and dramaturg explored. Prerequisite: Graduate standing.

THTR 720 **Playwrights Workshop** **1-5 credits**

Weekly meeting of all playwrights for reading and discussion of works in progress. Prerequisite: Consent of instructor.

THTR 725 **Directing Studio** **3 credits**

Laboratory course in the technique and aesthetics of directing. Topics rotate each semester and may include history of directing, rehearsal techniques, script analysis, visualization, and collaboration. Specific laboratory assignments may include apprenticeships, dramaturgy, stage management as well as directing short, full-length musical and original playscripts. May be repeated to a maximum of eighteen credits. Prerequisite: Consent of instructor.

THTR 727 **Scene Design Studio I** **3 credits**

Focuses on training the first-year graduate student in scene design. Emphasizes the essential skills of drafting, researching historical and visual sources, aesthetic judgment, concept development, and production collaboration. Student required to assist faculty and advanced designers on a minimum of three productions for the year. Prerequisite: Consent of instructor.

THTR 728 **Scene Design Studio II** **3-6 credits**

Focuses on training the second-year graduate student in scene design. Develops skills in rendering, model making, and refines skills through assignment as designer on a minimum of two department productions for the year. May be repeated to a maximum of nine credits. Prerequisite: THTR 727.

THTR 729 **Scene Design Studio II** **3-6 credits**

Focuses on the graduate student's last year of development. Provides the student with the opportunity to demonstrate the mastering of the professionalism needed to practice the art of scene design. Student required to design a minimum of two productions for the year. May be repeated to a maximum of nine credits. Prerequisite: THTR 728.

THTR 732 **Technical Direction Studio I** **3 credits**

Trains the first-year graduate student in technical direction. Emphasizes the essentials skills of drafting, CAD, researching historical and visual sources, aesthetic judgement, concept development and production collaboration. Student required to assist faculty and advanced technical direction students on a minimum of two productions for the year. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

THTR 733 **Technical Direction Studio II** **3 credits**

Trains the second-year graduate student in technical direction. Develops skills in rigging safety, welding, sound, construction techniques, construction methods, estimating, and ordering materials. Student required to assist faculty and advanced technical direction students on a minimum of three productions for the academic year. May be repeated to a maximum of nine credits. Prerequisite: THTR 732.

THTR 734 **3 credits**
Technical Direction Studio III

Focuses on the graduate student's last year of development. Provides student with the opportunity to demonstrate the mastering of the professionalism needed to practice the art of technical direction. Student required to serve as Technical Director for a minimum of two productions for the year. May be repeated to a maximum of nine credits. Prerequisites: THTR 733.

THTR 735 **3 credits**
Sound Design: Theory and Practice

Art of sound design developed through lectures, weekly projects, demonstrations, and production involvement.

THTR 736 **1-4 credits**
Stage Management Studio I

Focuses on the principles and techniques of stage management with emphasis on setting up the prompt book, dissemination of information, and the relationship with directors, actors, and staff. Also examines contracts that the stage manager works under with an emphasis on work-related rules. Stage management assignment. May be repeated to a maximum of eight credits. Prerequisite: Consent of instructor.

THTR 737 **1-4 credits**
Stage Management Studio II

In addition to lab assignments, rotating topics may include: Production, show management, entertainment on the road, performance artist representation, career preparation. Guest speakers address working in the professional theatre. May be repeated to a maximum of 16 credits. Prerequisites: Graduate standing, THTR 736.

THTR 739 **3 credits**
Theatre Management

Focuses on the relationship between the art and business of theatre, exploring "front of house" positions such as general managers, business managers, box office managers, publicity and development directors. Prerequisite: Graduate standing.

THTR 740 **3 credits**
Production Management

Examines the responsibilities of production managers. Focuses on organizational skills, dissemination of information and collaborative relationship that a production manager must foster with design, technical, and performance staff. Prerequisite: Graduate standing.

THTR 741 **3-6 credits**
Costume Design Studio I

Focuses on training the first-year graduate student in costume design. Emphasizes the essential skills of play analysis, historic period research, aesthetic judgment, costume rendering techniques and production collaboration. Student assists faculty and advanced graduate designers on a minimum of three productions for the year. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

THTR 742 **3-6 credits**
Costume Design Studio II

Focuses on training the second-year graduate student in costume design. Emphasizes the refinement of design skills, such as plot layouts, the costume plate, and fabric. Assignment of a minimum of two department productions for the year, demonstrating practical application of the knowledge gained. May be repeated to a maximum of nine credits. Prerequisite: THTR 741.

THTR 743 **3-6 credits**
Costume Design Studio III

Focuses on the graduate student's last year of development in his/her area of specialization. In addition to further refinements in theory, technique and style, program culminates with the student demonstrating the mastery of costume design through a minimum of two fully realized assignments for the year for a substantial department production. May be repeated to a maximum of nine credits. Prerequisite: THTR 742.

THTR 745 **3-6 credits**
Lighting Design Studio I

Focuses on training the first-year graduate student in lighting design. Develops skills in concept development research, production collaboration, design, drafting and execution of the light plot for theatre and dance. Student required to assist faculty and advanced designers on a minimum of three productions for the year. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

THTR 746 **3-6 credits**
Lighting Design Studio II

Focuses on training the second-year graduate student in lighting design. Further develops skills in concept development research, production collaboration, design, drafting and execution of the light plot for theatre and dance. Development through assignment on a minimum of two department productions for the year. May be repeated to a maximum of nine credits. Prerequisite: THTR 745.

THTR 747 **3-6 credits**
Lighting Design Studio III

Focuses on training the third-year graduate student in lighting design. Final year provides the student with the opportunity to demonstrate the mastering of the skills and responsibilities of a lighting designer. Student required to design a minimum of two productions for the year. May be repeated to a maximum of nine credits. Prerequisite: THTR 746.

THTR 748 **3 credits**
Seminar in Theatre Architecture and Apparatus

In-depth study of the architectural instrument, the theatre building. Covers the structural forms, grounding them in their historical timeline. The team-taught seminar provides a basic process for accessing and using the theatre building of the present and planning the theatre building of tomorrow. Prerequisites: Graduate standing.

THTR 749 **CAD for the Theatre** **3 credits**

Explores the use of computer-aided drafting in theatre design and technology. Includes training in Mincad, Maclux Pro and other programs available for use in theatre design and technology practices. Prerequisite: Consent of instructor.

THTR 763 **Audition Technique** **2 credit**

Preparation of a theatre audition, both musical and nonmusical. Study of theatrical unions, contracts, agents, and the legal and professional aspects of professional acting. Instructor approval.

THTR 764 **Dialects for the Stage** **2 credits**

Study and practice of dialects and accents for the stage. Prerequisite: Consent of instructor.

THTR 771 **Acting Studio** **2 credits**

Laboratory course in the practice and process of the technique, craft, and aesthetics of acting. Through a series of basic exercises and improvisational studies specialized skills in action, subtext, environment, sensory awareness, characterization, language, and script analysis are developed in the context of a variety of theatrical styles which are rotated each semester. May be repeated to a maximum of twelve credits. Prerequisite: Consent of instructor.

THTR 773 **Scene Study** **2 credits**

Repertory course for actors and directors. Rotating scene material selected each semester from the canon of theatrical literature and may include contemporary drama, classical American realism, Shakespeare, Greek and Roman drama, Comedy of Manners, musical theatre, original scripts, Modernism, the avant garde, television & film, and performance may be repeated to a maximum of twelve credits. Prerequisites: Graduate status, consent of instructor.

THTR 775 **Sound and Movement Studio** **2 credits**

Integrated voice and body course designed specifically for the actor to increase strength, flexibility, range, control, placement, coordination, and efficiency. Exercises and improvisational studies are designed specifically to address the psycho-physical aspects of dramatic action and character transformation. May be repeated to a maximum of twelve credits. Prerequisite: Instructor approval.

THTR 777 **Movement for the Actor** **1 credit**

Rotating course in various movement disciplines which have practical application to the art and craft of acting. Topics may include the Alexander Technique, the Feldenkrais Method, Pilates techniques, Suzuki, yoga, tai chi, weight training, aerobics, stage combat, mime, clown, circus techniques, improvisation, and movement for period style. May be repeated to a maximum of twelve credits. Prerequisite: Consent of instructor.

THTR 778 **Problems in Makeup** **3 credits**

Study and practical experience in the art of makeup. May be repeated to a maximum of six credits.

THTR 779 **Speech for the Actor** **1 credit**

Technical course in articulation and pronunciation for the actor. Vocal anatomy and physiology, the International Phonetic Alphabet, phrasing, linkage, syllabication, stress, and vowel length explored for clarity, efficiency, coordination, dexterity, and control in the formation of the sounds of spoken English. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

THTR 781 **Dance for the Actor** **1 credit**

Laboratory course in the technique and aesthetics of dance. Different dance forms of styles rotated each semester may include ballet, modern, jazz, tap, ballroom, and musical theatre dance.

THTR 791 **Commerce of Theatre** **2 credits**

Study of theatre contracts, unions, legal, management, and practical business/market concerns.

THTR 793 **Special Topics in Theatre** **1-3 credits**

Selected topics announced including master classes. May be repeated to a maximum of six credits.

THTR 795 **Supervised Individual Study** **1-4 credits**

Designed only for those students whose degree program requires a project in lieu of thesis and to be used only in connection with that project. Must be taken for the maximum four credit hours, but these hours should normally be spread over at least two terms. A student may not register for this course until the project supervisor has been designated and the project tentatively established.

THTR 796 **Internship** **1-12 credits**

Internship at regional centers of theatre activity. May be repeated to a maximum of 12 credits. Prerequisite: Subject to M.F.A. program requirements.

THTR 797**1-12 credits****Creative Project**

Planning and execution of a major creative proposal as a thesis production and project. May be repeated to a maximum of twelve credits. Prerequisite: Subject to M.F.A. program requirements.

THTR 798**1-6 credits****Thesis**

Must be taken for a maximum of six hours, but these hours normally should be spread over at least two terms. A student may not register for this course until the thesis director has been designated and the topic tentatively established. May be repeated to a maximum of six credits. S/F grading only. Prerequisite: Graduate standing.

Graduate credit may be obtained for course designated 600 or above. Full descriptions of these courses may be found in the UNLV *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

THTR 621A Entertainment & Fine Art Law I

THTR 621B Entertainment & Fine Art Law II

THTR 654 Directing I

THTR 661 Play Structure and Analysis

THTR 675 Musical Theatre Literature

THTR 681 Theatre History I

THTR 682 Theatre History II

Division of Health Sciences

As part of an overall strategic planning effort, UNLV has designated Biomedical and Health Sciences as one of the new and significant multidisciplinary areas of academic and research emphasis. In order to optimize this effort, UNLV has formed the Division of Health Sciences to improve the capability of the campus to address the broad range of health-related issues in southern Nevada and the nation, enhance pre-professional student development and advising, create innovative academic programs to meet professional workforce needs and coordinate campus multidisciplinary efforts to compete nationally for academic and research funding.

The Division of Health Sciences provides a diverse array of undergraduate and graduate programs in the health sciences.

- School of Dental Medicine
- School of Health and Human Sciences
 - Department of Health Physics
 - Department of Kinesiology
 - Department of Nutrition
 - Department of Physical Therapy
 - Clinical Laboratory Science Program
- School of Nursing
- School of Public Health
 - Public Health
 - Health Promotion

Future developments in pharmacy and public health are expected.

I welcome you to explore your future in health sciences education and research at UNLV.

*Dr. Patrick Ferrillo, Jr.
Vice Provost for the Division of Health Sciences
and Dean of the School of Dental Medicine*

School of Dental Medicine

The UNLV School of Dental Medicine, which accepted its Inaugural Class in August of 2002, has been designed to serve our local community and the state of Nevada in oral health care, health services, research and scholarly activities. Education of dental students will be accomplished through a competency based curriculum with a special emphasis on biomedical sciences, professional studies and an innovative vertically integrated team approach for clinical instruction and delivery of patient care. The School of Dental Medicine is recruiting and employing a diverse and distinguished faculty to facilitate the program.

The competency-based education program has at its core a student and patient centered environment designed to maximize learning and patient care delivery. Beginning dentists will be exposed to indepth studies of biological and clinical sciences as well as biomedical and bio-ethical disciplines. Students will encounter a broad spectrum of clinical experiences to prepare them for entry into the profession. These experiences will begin in year one of the curriculum, and clinical responsibilities will expand in scope and depth throughout the four years. During year four, students will have the opportunity to select placement in a variety of clinically supervised community settings. They will also have extensive exposure to business and financial management designed to meet the challenges of dental practice. Furthermore, they will be introduced to principles of research, will have an opportunity to conduct independent research and will be encouraged to pursue scholarly activities with the possibility of creating a career in academic dentistry.

Training will occur in state of the art facilities designed to achieve the goals of the dental academic program. Today's dental professional needs a learning environment that offers interaction with other medical professionals and facilitates diagnosis and treatment to improve the patient's overall health. The dental school is adopting this new reality and keeping it at the forefront as it designs the teaching facility at the UNLV Shadow Lane campus. The building is part of a regional campus that is expected to house the university's biotech research center, including the UNLV Cancer Institute. Students will have access to the latest technology with other health care professionals in diagnosing disease and treating patients. By the time of graduation, students will be competent and confident to begin a rewarding career as a provider of comprehensive oral health care.

For additional information, visit <http://dentalschool.unlv.edu>.

Dean

Ferrillo, Jr., Patrick, (2002) D.D.S., Baylor College of Dentistry; B.S., Georgetown University.

School of Health and Human Sciences

The School of Health and Human Sciences provides undergraduate and graduate education to students in the health sciences. The curricula are designed to prepare students for entry-level health-related positions and further graduate or professional studies. Educational experiences include rigorous classroom instruction, laboratory/clinical practice, research, and mentoring. It is a goal of the School of Health and Human Sciences faculty to produce graduates who are professionally competent capable of critical thinking, and highly sought after by employers. Graduates will exhibit high ethical professional standards, be devoted to lifelong learning and be prepared to respond to local, regional or national level demands in their fields of study.

Departments offering Graduate Degree Programs

Health Physics

The department emphasizes the environmental aspects of radioactivity, safety, environmental issues associated with radioactive waste disposal, and the use of photodynamic therapy to treat cancer. Graduate Degree in Health Physics.

Kinesiology

Provides a program of study in the science of human movement for students interested in the allied health professions. The Department is committed to an interdisciplinary approach to professional preparation and scholarship. Graduate degrees in Kinesiology and Exercise Physiology.

Physical Therapy

Physical therapy is a specialty in the field of health care that is concerned with the prevention of disability and the physical rehabilitation following impairment. The goals of physical therapy are to help patients regain diminished physical function, which has been lost secondary to injury or disease, and to relieve pain. Doctor of Physical Therapy (DPT).

Health Physics

Chair

Madsen, Steen (1997), Assistant Professor; B.S., University of Toronto; M.S., Ph.D., McMaster University.

Graduate Coordinator

Patton, Phillip (2000), Assistant Professor; B.S., Augusta College; M.S., University of Georgia; M.S., Ph.D., University of Florida.

Graduate Faculty

Hechanova, Anthony E. (1995); Research Scientist; B.S. M.S., University of California, Davis; M.S., Ph.D. Massachusetts Institute of Technology.

Hull, Carter D. (2000); Senior Research Scientist; B.A., M.S., University of California, Riverside; Ph.D., University of Oregon.

Riland, Carson A. (1996); B.S. Bloomsburg University; M.S., Ph.D. Texas A&M University.

Rudin, Mark J. (1993), Associate Professor; B.S., M.S., Ph.D., Purdue University.

Many industries, medical facilities, and research laboratories demand professionals who understand radiation hazards, their prevention and control. Prominent among scientists is the health physicist, who controls the beneficial use of ionizing radiation while protecting workers and the public from potential hazards. Our M.S. program provides students with instruction and research opportunities in the field of radiation protection with emphasis on environmental health physics, radioactive waste management, radiation dosimetry, medical physics, and medical health physics. The Department of Health Physics faculty look forward to working with prospective students in this challenging program of study.

Health physics is the profession dedicated to the protection of the individual, the population, and the environment from the potentially harmful effects of radiation. It incorporates the principles and technical skills from many disciplines: physics, chemistry, biochemistry, biology, mathematics, ecology, toxicology, and industrial hygiene. The wide spectrums of knowledge required of the health physicist make this profession both challenging and rewarding.

The Master of Science (M.S.) in Health Physics is designed to prepare students in the field of health physics to administer public and private radiation health programs; investigate medical uses of radioactivity; measure and control radiation in the workplace and the environment; ensure compliance with radiation protection regulations; assist in the cleanup of radioactive and hazardous waste sites; evaluate worker, patient, and public radiation doses; and conduct research in radiation protection.

The Program Educational Objectives for the M.S. in Health Physics Program are as follows:

1. Graduates will demonstrate competency in applying the theoretical and problem solving aspects of health physics and related disciplines.
2. Graduates will demonstrate competency in the practical applications of health physics.
3. Graduates will effectively communicate technical information in both oral and written form.
4. Graduates will be competent in research methods and be able to critically review research with the intent of applying findings to their practice.
5. Graduates will be prepared to pursue a lifetime of self-directed learning and professional development.
6. Graduates will conduct themselves in a professional and ethical manner.

Admission Requirements

Applications for admission may be obtained by contacting the Department of Health Physics or the Graduate College. Completed applications, official Graduate Record Examination (GRE) scores and one copy of official transcripts from all institutions attended after high school are submitted to the Graduate College. All other data (i.e., letters of recommendation and statement of professional goals) are submitted directly to the Department of Health Physics.

Students seeking admission to the graduate program in health physics must fulfill the following admission requirements:

1. Overall GPA of 3.00 (A=4.00 or equivalent) in undergraduate work. Applicants with a GPA below 3.00, but not less than 2.75, may be admitted as a graduate provisional student.
2. Successful completion (grade of C or better) of the following course work:
 - a. Seven-semester credits in biology including an introductory modern biology course and one higher-level course
 - b. Ten-semester credits in chemistry or geology including a general chemistry sequence and one higher-level course
 - c. Eight-semester credits in elementary calculus (mathematics through differential equations is recommended)
 - d. Twelve-semester credits in physics including a general physics sequence
 - e. A course in computer programming (an additional course in numerical methods or scientific computing is recommended)

Applicants not meeting a limited number (maximum of nine credit hours) of prerequisite requirements may still be admitted to the program. However, prerequisite requirements may still be admitted to the program. However, prerequisite deficiencies must be completed during the first year of study and prior to registering for HPS 796 or 797.

3. Completion of a baccalaureate degree in health physics, one of the basic sciences, or in a closely related scientific or engineering field. Applicants holding a degree in a

non-related field may be given special consideration if they have completed all prerequisite course work.

4. A composite score of 1,000 or higher on the verbal and quantitative sections of the Graduate Record Exam (GRE).
5. Three letters of recommendation from former instructors or employers that speak to the applicant's potential as a graduate student. The individual writing the letter may use the form available from the Graduate College, which includes a release form for the student to sign.
6. A statement of approximately 300 words indicating the student's professional goals and reason for seeking graduate education.
7. International applicants whose native language is not English must show competency in the English language before they can be admitted. A satisfactory score (minimum 550 on the written or 213 on the computerized version) on the "Test of English as a Foreign Language" (TOEFL) or comparable evidence of competency in English must be submitted by students as part of their application.

Progression

To progress in the program students must:

1. Maintain a cumulative grade point average of 3.00 or above each semester enrolled.
2. Receive a grade of B (3.00) or above in all core health physics courses. If less than a B is earned, the course may be repeated. The student must be in good standing to repeat a course, and any core course may be repeated only once.
3. A student may register for a course only twice. A student who registered for the same core course twice and has received a grade less than B is ineligible for readmission unless unanimously approved by Health Physics Program graduate faculty.
4. Complete a minimum of six semester hours in each calendar year.
5. Continuously register for three credit hours of HPS 796 or HPS 797 each semester while working on the thesis or professional paper until completion.

Advisement

The Health Physics Graduate Program Director will serve as academic advisor to all entering students for program planning. At the time the student selects his/her examination committee, the committee chairperson becomes the student's official advisor.

Degree Requirements

Requirements for the Master of Science in Health Physics include completion of 36 semester hours in required and elective graduate courses. These requirements will be established in consultation with the student's advisor in accordance with the Department of Health Physics and Graduate College policy and shall include:

1. Health Physics Core (21 credits):
HPS 602, 620, 680, 701, 718, 720, 728 and 791 (three times)
2. Electives (9 credits):
Graduate-level health physics or other approved graduate-level courses. It is recommended that electives include a statistics course and either the Environmental Health Physics or Medical Physics areas listed below:
 - a. Environmental Health Physics: HPS 670, 750
 - b. Medical Physics: HPS 740, 742
3. Completion of a thesis or professional paper (6 credits):
HPS 796 or 797.

Graduation Requirements

Students in the M.S. in Health Physics Program must adhere to the following requirements for graduation:

1. Residency Credits. A minimum of 20 credits exclusive of thesis or special topic project must be earned at UNLV. A minimum of 15 credits must be accumulated within the School of Health and Human Sciences. Attendance at the University of Nevada, Reno does not interrupt, but does not contribute to, residency credits, because this institution is within the University and Community College System of Nevada.
2. Credit by Challenge Examination. Graduate courses in the Health Physics program may not be challenged for credit.
3. Six-year Completion Rule. All degree requirements must be completed within six calendar years from the date of matriculation. No credit may be used in an advanced degree program for course work completed more than six calendar years immediately preceding the term in which all degree requirements are completed.
4. Allotment of Credits. Students have a choice of catalog under which they wish to graduate a) the year of official matriculation or b) the year of graduation. Students are encouraged to meet the requirements of the current catalog.
5. A final oral examination will be held following completion of the thesis or professional paper resulting from a special topics project. The final examination must be held at least three weeks prior to the last day of instruction in the term in which the student plans to complete the degree requirements.

Health Physics

HPS 701 4 credits **Radiation Physics and Protection**

Atomic and nuclear structure; decay energetics and kinetics; interactions of radiation with matter; radiation protection standards; practical aspects of radiation protection; photon, neutron, beta and X-ray shielding; criticality; radiation protection at reactors, accelerators and medical facilities; radioactive material transportation regulations. Prerequisites: BIO 189, CHE 116 and PHY 182.

HPS 702 3 credits **Radiation Detection and Transport**

Detection of ionizing radiation, counting statistics, and radiation transport modeling. Prerequisites: HPS 701, STA 161 or 491, or consent of instructor. Corequisite: HPS 718.

HPS 718 1 credit **Radiation Detection Laboratory**

Laboratory experiments in radiation detection and counting statistics. Operation and calibration of survey instruments, alpha and gamma-ray spectrometry equipment, proportional counters, and liquid scintillation counters for qualitative and quantitative analyses examined. Corequisite: HPS 602. Consent of instructor.

HPS 720 3 credits **Radiation Dosimetry**

Mathematical treatment of the fundamental principles of internal and external radiation dosimetry. Pathway models and bioassay techniques studied to support the calculation of radiation dose from the intake of radioactivity. General external dosimetry from a variety of industrial and medical sources addressed. Prerequisites: HPS 701 or consent of instructor.

HPS 728 2 credits **Radioanalysis Laboratory**

Analysis of environmental and bioassay samples. Topics include sample collection, preservation and preparation, in vivo and in vitro bioassay, data interpretation, and error propagation. Students use laboratory results for human and ecological dose estimates. One hour lecture and three hours laboratory. HPS 720 and HPS 718, or consent of instructor.

HPS 740 3 credits **Medical Imaging Physics**

Conceptual, mathematical, and diagnostic aspects of commonly used clinical imaging modalities including film-screen radiography, computed tomography, magnetic resonance imaging, photon emission computed tomography, positron emission tomography, and ultrasound. Prerequisites: HPS 701 or consent of instructor.

HPS 742 **3 credits**
Radiation Therapy Physics

Use of ionizing and nonionizing radiation in radiation therapy to cause controlled biological effects in cancer patients. Emphasis on external treatment techniques using photon and electron beams, internal treatment techniques, and treatment planning. Prerequisites: HPS 701 or consent of instructor.

HPS 750 **3 credits**
Radiation Risk Assessment

Descriptive and mathematical treatment of radionuclide transport, bioaccumulation, and human uptake. Risk analyses based on recent epidemiological studies reviewed. Prerequisites: HPS 670 or consent of instructor.

HPS 760 **3 credits**
Environmental Restoration and Radioactive Waste Management

Overview of the cleanup and management of radioactive and mixed wastes in the federal and private sector. Role of radiation protection personnel in radioactive waste management activities discussed. Prerequisites: HPS 701 or consent of instructor.

HPS 772 **3 credits**
Environmental Radiation Measurements

Laboratory sessions provide practical experience with techniques to evaluate the presence of radioactivity in environmental media. Topics include environmental radiation sources, environmental monitoring plans, sample collection and analysis, in-situ gamma-ray spectrometry, data interpretation and laboratory quality control. One hour lecture and three hours laboratory. Prerequisites: HPS 670 and HPS 728 or consent of instructor.

HPS 781 **3 credits**
Industrial Hygiene II

Overview of the major physical and biological hazards in the industrial environment emphasizing recognition, monitoring technology, engineering control methodology, and best practice. Prerequisites: HPS 680 or consent of instructor.

HPS 791 **1 credit**
Graduate Seminar

Overview of research methods, ethics, professional development, and technical communications related to health physics. Students prepare and give seminars on topics of interest in health physics. May be repeated for a maximum of three credits.

HPS 795 **1-3 credits**
Independent Study

Individual directed study of a topic in health physics not covered in depth in other courses. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in health physics and consent of instructor.

HPS 796 **3 credits**
Professional Paper

Discussion of the components of a research proposal, writing a research proposal, and conducting pilot projects. May be repeated but only six credits applied to the student's program. S/F grading only. Prerequisites: HPS 620, HPS 701, graduate standing in health physics, and consent of instructor.

HPS 797 **3 credits**
Thesis

May be repeated but only six credits applied to the student's program. S/F grading only. Prerequisites: HPS 620, HPS 701, graduate standing in health physics, and consent of instructor.

The following courses have been approved for graduate credit. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

HPS 602 Radiation Detection
HPS 620 Radiation Biology
HPS 670 Environmental Health Physics
HPS 680 Industrial Hygiene

Health Sciences

HSC 777 **3 credits**
Advanced Applied Statistics for the Health Sciences

Application of advanced statistical procedures to the investigation of research problems in the health science professions. Emphasis on a conceptual understanding of selected advanced statistical techniques with application to the investigation and analysis of problems in the health sciences area. Prerequisites: Introductory course in statistics and introduction to research methodology course or consent of instructor.

Kinesiology

Chair

Mercer, John (1999), Associate Professor; B.S., Buffalo State College of New York; M.S., University of North Texas; Ph.D., University of Oregon.

Graduate Coordinator

Ruble, Mack (2001), Assistant Professor; B.S., University of Colorado; M.S., University of Pennsylvania; Ph.D., Brigham Young University.

Graduate Admissions Coordinator

Wulf, Gabriele (1986), Professor; Diplom, Ph.D., Deutsche Sporthochschule Koln; Ph.D., University of Munich.

Graduate Faculty

Golding, Lawrence A. (1976), Professor; B.S., M.S., Ph.D., University of Illinois.

Guadagnoli, Mark A. (1991), Professor; B.S., M.S., Texas A&M University; Ph.D., Auburn University.

Holcomb, William R. (2000), Associate Professor; B.S. Berry College; M.S. U.S. Sports Academy; Ph.D. Auburn University.

Mangus, Brent C. (1984), Associate Professor; B.S., Utah State University; M.S., University of Oregon; Ed.D., University of Utah.

Massengale, John D. (1986), Professor; B.S., Northwest Missouri State University; M.S., Illinois State University; Ed.D., University of New Mexico.

Tandy, Richard D. (1989), Associate Professor; B.S., Appalachian State University; M.S., Ph.D., Texas A&M University.

Young, John C. (1991), Professor; B.S.Ed., M.S., University of Michigan; Ph.D., University of Wisconsin, Madison.

Kinesiology is the study of human movement as it relates to human performance. The graduate degrees offered by the Department of Kinesiology are designed to prepare students for advanced study in biomedical sciences, clinical positions, and leadership positions in instituting physical fitness programs in public and private organizations. The department is committed to an interdisciplinary approach to professional preparation and scholarship and to creating an environment in which both basic and applied research in the field of kinesiology is stimulated. Comprehensive laboratories have been developed for the study of human performance, injury rehabilitation, and skill acquisition. Students are afforded the opportunity to work closely with faculty in all areas of academics and research. The faculty are recognized internationally through their scholarship and research and are enthusiastically committed to graduate education.

The Department of Kinesiology offers programs of study that lead to a Master of Science degree in Exercise Physiology or Kinesiology. These degree programs allow students a choice of preparation and opportunities to specialize in biomechanics, exercise physiology, motor learning/motor control and sports medicine. The goal of the graduate program in kinesiology is to provide students with the theory, knowledge, and skills necessary to apply the

principles of human movement in a variety of community, research, clinical, or athletic settings, or to pursue advanced study at the doctoral level.

Admission Requirements

Students are admitted in the fall, spring, and summer semesters. Applicants for admission must have an undergraduate major in kinesiology, exercise science, physical education, athletic training, biology, or a related academic discipline.

Applicants must have a minimum overall undergraduate grade point average of 2.75 (A=4.0), or 3.00 (A=4.0) in the last two years. The Graduate Record Examination must be taken prior to applying. Successful applicants generally have a 3.00 undergraduate grade point average and a combined score of 1000 on verbal and quantitative sections of the GRE and higher than 3.5 on the analytical section

Interested applicants must send the following information to the Graduate College:

1. A completed application for graduate studies.
2. Official transcripts of all colleges and universities attended.

Interested applicants must send the following information to the Department of Kinesiology:

1. Copies of all transcripts sent to the Graduate College.
2. Official GRE scores.
3. A letter of intent that addresses:
Reason(s) for wishing to earn an advanced degree.
Motivation for attending UNLV.
Summary of educational goals.
Summary of research activities and interests.
Possible faculty mentors.
4. Two letters of recommendation from persons familiar with the applicant's academic record and potential for graduate study.

Master of Science in Exercise Physiology

The Master of Science in Exercise Physiology is designed to provide the student with an understanding of the physiological effects of exercise on the human body. The program also emphasizes the effect of regular exercise on adults and gives the students experience in administering, measuring, and conducting adult fitness programs in the YMCA or corporate setting, to help conduct postcoronary exercise programs in a hospital, to conduct physical fitness evaluations, and to assist in conducting exercise testing. In addition, the graduate is prepared for entrance into a doctoral program in exercise physiology.

The program emphasizes academic preparation in exercise physiology, laboratory experience, exercise leadership experience, knowledge of research methodology, and statistics. Students work in the Exercise Physiology Laboratory and may also choose to work in the experimental adult fitness class. Students must complete a thesis in the general area of exercise physiology.

Degree Requirements

The Master of Science in Exercise Physiology requires a minimum of 33 credit hours. The curriculum for the M.S. in Exercise Physiology consists of the following courses:

Core Courses

KIN 738	Human Physiology	3 cr
KIN 739	Evaluation of Physical Working Capacity	3 cr
KIN 740	Advanced Exercise Physiology	3 cr
KIN 745	Human Energy Metabolism	3 cr

Research Tools

KIN 741/742	Independent Study in Exercise Physiology	3 cr
KIN 751	Selected Applications of Statistical Techniques I	3 cr
KIN 750	Research Methods	3 cr
KIN 749	Thesis	6 cr
	Electives	6 cr

Master of Science in Kinesiology

The Master of Science in Kinesiology is designed for students interested in the study of human motor performance. Students are provided with the theoretical foundations of the movement-based sciences and select an emphasis in biomechanics, motor learning, motor learning/control, or sports medicine. Through involvement in directed research projects, students obtain an in-depth understanding of laboratory equipment research and applications in the biomedical sciences. Graduates are prepared to make applications of the movement sciences in research, clinical or athletic settings and for entrance into doctoral programs in kinesiology.

Degree Requirements

The Master of Science in Kinesiology requires a minimum of 33 credit hours. The curriculum for the M.S. in Kinesiology consists of the following:

Core Courses (9 credits)

Students must complete one course from each of three areas: biomechanics, motor learning/motor control, exercise physiology.

Research Tools (6 credits)

KIN 750	Research Methods	3 cr
KIN 751	Selected Applications of Statistical Techniques I	3 cr

Specialization (9 credits)

Research opportunities and course work are available in biomechanics, motor learning/motor control, and sports medicine. The individual student's program will be developed in consultation with the student's advisor.

Thesis Option (9 credits)

Students electing to complete a thesis must complete KIN 749 and three credits of electives in consultation with their advisor.

Non-Thesis Option (9 credits)

Students electing this option will select nine credits of electives in consultation with their advisor. The electives will include credits to write a professional paper in consultation with their advisor and examination committee.

Kinesiology

KIN 700 1-6 credits

Special Problems in Kinesiology

Specialized instruction and/or research designed to develop depth in understanding a current kinesiology problem. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

KIN 731 3 credits

Orthopedic Assessment in Sports Medicine

Theory and methods of orthopedic assessment as they relate to the understanding, evaluation, treatment, and rehabilitation of sport injuries. Emphasis on advanced understanding of the theoretical applications of advanced assessment techniques for orthopedic injuries. Prerequisites: Consent of instructor.

KIN 733 3 credits

Psychological Aspects of Sport and Rehabilitation

Overview of theoretical concepts and techniques in sport psychology. Emphasis on the application of psychology to human movement, skilled athletic performance, and injury rehabilitation.

KIN 734 3 credits

Therapeutic Intervention in Sports Medicine

Theoretical background in the application of therapeutic intervention in a practical setting.

KIN 735 3 credits

Sports Medicine Rehabilitation Principles and Practices

Provides opportunity to study theory and techniques of various exercise rehabilitation processes and apply these processes on a case study basis. Prerequisites: Graduate standing and consent of instructor.

KIN 736 3 credits

Biomechanical Applications in Kinesiology

Provides opportunity to learn mechanical principles underlying human movement and apply these skills in a laboratory situation. Prerequisites: Graduate standing and consent of instructor.

KIN 737 3 credits

Biomechanics of Strength

Interdisciplinary examination of concepts and principles involved in strength development and force production. Includes study of neurological, physiological and mechanical factors affecting force/tension/power generation, and biomechanical interactions with external loads and various resistance training equipment. Prerequisite: Graduate standing or consent of instructor.

KIN 738 **Human Physiology** **3 credits**

Study of mechanisms which regulate physiological systems and the way regulation functions to maintain homeostasis. Emphasis on those systems involved in the integrated response to exercise. Prerequisites: Consent of instructor, undergraduate course in anatomy and physiology.

KIN 739 **Evaluation of Physical Working Capacity** **3 credits**

Concepts and methodology in the measurement of energy metabolism in humans. Examination of the various methods used to measure physical working capacity with the treadmill and ergometry. Understanding of basic electrophysiology of myocardium and pulmonary function measurements. Prerequisite: Consent of instructor.

KIN 740 **Advanced Exercise Physiology** **3 credits**

Lecture, discussion, and laboratory experiences dealing with impact of acute and chronic exercise on several systems. Selected topics such as nutrition and exercise, weight control, physical working capacity, and body composition. Prerequisite: KIN 739.

KIN 741 **Independent Study in Exercise Physiology I** **3 credits**

Individually arranged programs of in-depth study on selected topics in exercise physiology. Emphasis on respiratory gas analysis, human calorimetry, exercise electrocardiography, body composition, and physical work capacity. Prerequisites: Advanced graduate standing in exercise physiology and consent of instructor.

KIN 742 **Independent Study in Exercise Physiology II** **3 credits**

Individually arranged programs of in-depth study on selected topics in exercise physiology. Emphasis on respiratory gas analysis, human calorimetry, exercise electrocardiography, body composition, and physical work capacity. Prerequisite: KIN 741.

KIN 743 **Research Techniques in Biomechanics** **3 credits**

Examination of some of the techniques used in biomechanical research for data collection, analysis, and presentation. Emphasis on developing an understanding of experimental techniques, their capabilities and limitations. The lecture/discussion/lab sessions provide a historical and theoretical basis for each of the techniques examined. Prerequisite: Graduate standing or consent of instructor.

KIN 744 **Thermoregulation During Physical Work** **3 credits**

(Same as BIO 744.) Emphasizes physical mechanisms of heat transfer and their physiological control: relationship among body temperatures, sweat rate, exercise loads, environmental temperature, and heat stress. Prerequisites: KIN 739 and consent of instructor.

KIN 745 **Human Energy Metabolism** **3 credits**

Study of the interactions between nutrition, energy metabolism, and physical exercise. Emphasis on how the body assimilates, stores, and makes available food energy to power muscular work. Prerequisite: KIN 739 or consent of instructor.

KIN 747 **Graduate Seminar** **1 credit**

Oral presentations of proposed and completed research by graduate students, graduate faculty, and guests. May be taken for credit to a maximum of four credits.

KIN 748 **Professional Paper** **1-6 credits**

May be repeated but only two credits will be applied to the student's program. S/F grading only.

KIN 749 **Thesis** **3-6 credits**

May be repeated but only six credits will be applied to the student's program. S/F grading only.

KIN 750 **Research Methods** **3 credits**

Overview of techniques used in historical, descriptive, and experimental research such as those found in exercise science, health, physical education, and recreation research publications. Procedures for formulating a research proposal; hypothesis testing; experimental designs and statistical applications.

KIN 751 **Selected Application of Statistical Techniques I** **3 credits**

Introduction to descriptive and inferential statistical procedures utilized in studies reported in exercise science, health, physical education, and recreation. Prerequisite: KIN 750.

KIN 752 **Selected Application of Statistical Techniques II** **3 credits**

Statistical analysis techniques including correlation and regression, anova, multivariate analysis, manova for repeated measures designs. Introduction to selected statistical software packages; computer-aided graphics and data presentation techniques. Prerequisite: KIN 751 or consent of instructor.

KIN 760 **Motor Learning** **3 credits**

Advanced studies in psychomotor behavior. Details the underlying cognitive components of movement including discussions of motor learning, memory, and information processing. Prerequisite: Consent of instructor.

KIN 761 **Human Motor Control** **3 credits**

Advanced study of human motor control in such areas as the control of movement and stability.

KIN 762 **3 credits**
Motor Learning Applications

Designed to explain basic concepts of motor learning involved in organizing and scheduling practice for efficient learning/teaching of motor skills. Includes discussions of memory, feedback, stages of learning, and other motor learning principles.

KIN 791 **1-3 credits**
Independent Study in Biomechanics

Independent study of a selected topic in biomechanics. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in KIN 790-795 may be counted towards a master's degree. Prerequisite: Consent of instructor.

KIN 792 **1-3 credits**
Independent Study in Measurement & Evaluation

Independent study of a selected topic in measurement and evaluation. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in KIN 790-795 may be counted towards a master's degree. Prerequisite: Consent of instructor.

KIN 793 **1-3 credits**
Independent Study in Motor Behavior

Independent study of a selected topic in motor behavior. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in KIN 790-795 may be counted toward a master's degree. Prerequisite: Consent of instructor.

KIN 795 **1-3 credits**
Independent Study in Sports Injury Management

Independent study of a selected topic in sports injury management. May be repeated to a maximum of six credits. A maximum of six hours of independent study accumulated in KIN 790-795 may be counted towards a master's degree. Prerequisite: Consent of instructor.

The following courses have been approved for graduate credit. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

KIN 601	History of Exercise and Sport Science
KIN 605	Sports Nutrition
KIN 614	Enhancing Mental and Motor Abilities
KIN 615	Introduction to Forensic Kinesiology
KIN 685	Physical Activity and the Law
KIN 691	Exercise Physiology
KIN 692	Clinical Exercise Physiology
KIN 695	Sports Medicine

Physical Therapy

Chair

Wallmann, Harvey (1997), Chair, Physical Therapy; Assistant Professor; B.A., M.S., Purdue University; M.S., University of Indianapolis; DPTSc, Loma Linda University.

Graduate Coordinator

Altenburger, Peter (1998), Assistant Professor, B. S. UCLA; M.S. University of Miami Medical School.

Graduate Faculty

Altenburger, Elizabeth (2000), Assistant Professor, B. S. Purdue University; M.S. University of Miami Medical School.

Krum, Laura LaPorta (1997), Assistant Professor; B.S., University of Colorado; M.S., University of Miami Medical School, Ph.D., Texas Woman's University.

Landers, Merrill (2001), Assistant Professor; B.S., Brigham Young University; DPT, Creighton University.

McWhorter, J. Wesley (2000), Associate Professor; B.S., Ph.D., Brigham Young University; MPT, Baylor School of Physical Therapy.

The Department of Physical Therapy offers a graduate program leading to a Doctor of Physical Therapy (DPT) degree. The program is designed to prepare students to plan and administer treatment to help patients regain diminished physical function lost secondary to injury or disease, to promote soft tissue healing, and to relieve pain. By determining the degree of impairment, physical therapists are then able to help patients return to full function by using various physical agents such as electrical stimulation, heat, and cold to decrease pain and by using therapeutic exercises to increase strength, endurance, and coordination.

The purpose of the Department of Physical Therapy is to provide students pursuing a career in physical therapy the opportunity to acquire the knowledge and skills required for the safe practice of physical therapy. Students are prepared as generalists, but also have some opportunity to investigate specialized aspects of physical therapy through numerous clinical exposures. The program of study consists of approximately 111 credit hours of graduate course work and consists of intense academic and clinical work spread over five [SIX] semesters and two [THREE] summers. These hours are divided between classroom, clinical and research activities.

The DPT is an entry-level professional program designed to provide individuals with appropriate baccalaureate degrees the knowledge and skills to develop clinical and research expertise in the provision of physical therapy. Upon receiving this degree, students will be eligible to sit for the licensure examination in physical therapy.

The mission of the program is to develop competent, independent practitioners who will serve the community and the profession by practicing clinical physical therapy in a variety of health care settings for clients of all ages. The program is designed to educate students in a foundation of the basic sciences and emphasizes didactic, clinical,

managerial, and research components. Graduate studies are augmented through clinical practicums and clerkships, which provide the student an opportunity to integrate academic education with practical experience in particular areas of concentration. Graduates of the program will be proficient in critical thinking and skilled in evidence-based integrated treatment approaches. An additional goal of the program is to provide services to rural and under-served populations.

Admission Requirements

Admission to the program is limited to 20 available spaces per class. Students enrolling in any class in the Department of Physical Therapy must be admitted (graduate standing only, no graduate provisional standing accepted) to the program in the Summer semester of each year. Since enrollment is limited in the Physical Therapy program, satisfactory completion of prerequisite courses does not assure an applicant of admission. No student may take any class as a "Nondegree Seeking" student. Admissions criteria are reviewed by the faculty annually and are subject to change.

The following requirements are considered for admission into the Doctor of Physical Therapy program:

1. Prior to entering the program, candidates must complete prerequisite courses and earn a baccalaureate degree from an accredited college or university. There is no preference given to any particular baccalaureate degree.
2. A minimum overall undergraduate grade point average of 2.75 on a 4.0 scale with a minimum average of 3.0 on a 4.0 scale for prerequisite courses.
3. A composite score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination (GRE) is preferred. A score of 4 out of 6 is recommended on the Analytical Writing Section of the GRE.
4. Three letters of recommendation are required. Two of the letters need to be from a licensed physical therapist who can evaluate the applicant's potential as a student in the physical therapy program. The remaining letter can be from a former professor or employer.
5. An autobiographical statement of approximately 300 words describing the student's professional goals and reasons for seeking graduate education in physical therapy.
6. Knowledge of the field through actual work or volunteer experience (a minimum of 200 hours or more divided among hospital and outpatient facilities). Additional hours in diversified settings are strongly recommended.
7. An interview may be required.

Information to be submitted to the Graduate College:

1. An application with appropriate fee.
2. Official transcripts from all previous college and professional schools.
3. Official scores from the Graduate Record Examination (GRE).

Information to be submitted to the Department of Physical Therapy:

1. Official transcripts from all previous college and professional schools.
2. Three letters of recommendation.
3. The autobiographical statement.
4. A completed Prerequisite Form (included in the application packet).
5. A completed Observation Form (included in the application packet).

Prior to application to the program, the individual is advised to fully explore the nature of the profession of physical therapy. Students are expected to volunteer in or visit various physical therapy facilities in order to gain a broad view of the roles and responsibilities of a physical therapist. As part of the interview process, students will be assessed on their knowledge of the scope of the profession of physical therapy. Application forms are available from the Graduate College. The application deadline is January 31 preceding the [JUNE] in which admission is desired. After applications are received, they are reviewed regarding the minimum requirements, i.e., baccalaureate degree, GPAs, etc. Only the leading candidates will be invited for interviews during the Spring semester, which are based on satisfactory completion of the admission requirements.

The program is open to qualified applicants without regard to race, color, religion, sex, sexual orientation, age, national origin, marital status, or the presence of any physical, sensory, or mental disability.

Prerequisite Courses

In addition to completing the requirements of a baccalaureate degree, applicants must have completed or be able to complete the necessary specific hours of prerequisite course work with a grade of at least a C prior to admission to the program. Grades below a C in prerequisite courses will not be accepted. No more than two prerequisite science courses should be in progress or incomplete and all prerequisite science courses must be completed by the end of the spring semester (quarter) prior to commencing the program. Those students in the process of fulfilling the requirements of a prerequisite course must realize that their acceptance into the program is contingent upon satisfactory completion of that course during the application process. Courses taken on a pass-fail basis may not fulfill prerequisite requirements. Individuals submitting prerequisite course work completed prior to 1985 should contact the Admissions Committee to determine if the course work is appropriate to fulfill prerequisite course requirements, which are as follows:

1. One year of lecture-based biology courses
2. One year of laboratory and lecture-based anatomy and physiology courses
3. One year of laboratory and lecture-based inorganic chemistry
4. One year of laboratory and lecture-based physics
5. One semester of exercise physiology
6. One year psychology (introduction to psychology and one semester of either child, adolescent, developmental or abnormal psychology)

7. One semester statistics
8. One semester oral communication

Advisement

All entering students will be assigned a specific faculty member for the purpose of program planning and advising.

Policies and Procedures

Policies and procedures for didactic and clinical work regarding course grades, probation, separation, and reapplication are detailed in the Department of Physical Therapy *Student Manual and Clinical Education Manual*.

Progression

To progress in the Physical Therapy Program students must adhere to the following guidelines:

1. Maintain a cumulative grade point average of 3.00 or above each semester enrolled.
2. Receive a grade of B- or above in all required physical therapy courses. Students who do not maintain a 3.00 average or who receive any grade less than a B- in any course at the end of the semester will be notified in writing and placed on probation at that time. A second grade of C+ or lower received in any course in the ensuing semester or failure to restore the cumulative average to 3.00 or above during the ensuing semester will bring about separation from the program. The student's status in the program will be determined the Chair/Director on the recommendation of the Academic Review Committee (ARC) regarding the student's separation or action plan for remediation.
3. The student will not progress in the program if any of the following occur:
 - a. An earned F in any didactic course. This results in immediate separation without the option for reapplication.
 - b. Failure of a third attempt of any clinical competency check-off with the exception of the final practical exam.
 - c. A failure of a final practical exam (different than the competency check-off).
 - d. A grade of C+ or below in more than one course in any semester.
 - e. Inability to rectify probationary status within the time frame allotted by the ARC.
 - f. A student on probation whose actions warrant probation in another category (academic, professional behavior, clinical) may also be separated.
4. A student may register for a Supervised Clinical Education course only two times if the option to reapply is approved by the ARC and a recommendation is made to the department chair/director. This option is only available to students who have failed a clinical rotation and have been separated from the program. This option is not available to students failing didactic course work. A student who is registered for the same course twice and has withdrawn or received a Fail is ineligible for readmission unless otherwise approved by the ARC, Department Chair, and Graduate Dean.

5. The students must follow the proposed curriculum in the specified time frames unless otherwise approved by the ARC, Department Chair, and Graduate Dean.

Objectives:

1. To prepare students to be the purveyors of physical therapy practice through clinical excellence, critical thinking, scientific inquiry, and social responsibility and who are able to use differential diagnoses to guide referral as necessary.
2. To prepare graduates who will be able to work in a wide variety of settings and roles as practitioners, clinical educators and researchers, supervisors, administrators, and consultants.
3. To prepare students to adapt to changes in health care and society and be prepared to work in challenging environments with elderly, rural, and underserved populations.
4. To educate students in the design and implementation of culturally competent health care.
5. To develop scientific practitioners who are able to demonstrate the ability to critically analyze literature, utilize evidence-based integrated treatment approaches, and value clinical based research.
6. To prepare graduates to educate and encourage patients to achieve functional independence so they may have an improved quality of life and become more productive members of society.
7. To prepare graduates who will be able to organize and promote health awareness, wellness, and prevention education, and reintegrate populations with special needs into the community through outreach programs.
8. To prepare graduates to assume a leadership role in addressing critical issues that affect clinical practice, education, research, and public policy.
9. To prepare graduates to be committed to a lifetime of self-directed learning, professional development, and integrity and to exemplify professional and personal ethics and values.
10. To prepare graduates to demonstrate understanding of medico-legal issues in physical therapy practice through active involvement in professional organizations.
11. To educate students on the benefits of working interdependently with other health care professionals using a team approach to patient care.

Graduation Requirements

Students in the Physical Therapy program must adhere to the following requirements for graduation:

1. Satisfactory completion of the Physical Therapy program curriculum including the required period of clinical education with a grade point average of 3.00 or higher on a scale of 4.00.
2. Credit by Challenge Examination. Graduate courses in the Department of Physical Therapy may not be challenged for credit.
3. The program must be completed within six years from the date of matriculation. The chair/director will evaluate potential exceptions.

4. In addition to the course requirements, the student must satisfactorily prepare a written document and oral defense of a final research project, professional paper, or case report. The defense will consist of a presentation open to the public and the doctoral advising committee, followed by a period of questions.
5. Students must be in good standing with the Department of Physical Therapy and cannot be on a probation status at the time of graduation. Policies related to student probation, separation, and academic progress as stated in the current physical Therapy Student Manual are in compliance with the Graduate College.

Degree Requirements:

Summer Semester First Year (Both Sessions)

DPT 744	Gross Human Anatomy I	3 cr*
DPT 745	Gross Human Anatomy II	3 cr*
DPT 710	Selected Topics in Physical Therapy	1 cr
DPT 711	Medical Terminology in Physical Therapy	1 cr

Total Semesters Credit Hours: 8

Fall Semester First Year

DPT 730	Foundations of Observation and Assessment	4 cr*
DPT 742	Clinical and Pathological Physiology	5 cr
DPT 746	Neuroanatomy	4 cr
DPT 741	Orthopaedic Principles	3 cr*
DPT 749	Applied Exercise Physiology	3 cr

Total Semester Credit Hours: 19

Spring Semester First Year

DPT 754	Orthopaedic Assessment in Physical Therapy	4 cr
DPT 732	Therapeutic Exercise	3 cr
DPT 752	Physical Agents	2 cr*
DPT 756	Neurophysiology	4 cr
DPT 790	Clinical Research in Physical Therapy	3 cr
DPT 735	Functional Training	2 cr

Total Semester Credit Hours: 18

Summer Semester Second Year (Both Sessions)

DPT 748	Pharmacology in Physical Therapy	2 cr
DPT 753	Electrotherapy	2 cr*
DPT 722	Issues in Rural Health	1 cr
DPT 761	Supervised Clinical Education I	3 cr*

Total Semesters Credit Hours: 8

Fall Semester Second Year

DPT 720	Professional Development	2 cr
DPT 770	Cardiopulmonary Rehabilitation	2 cr
DPT 785	Orthopaedic Rehabilitation	3 cr*
DPT 786	Neurological Rehabilitation	3 cr
DPT 791	Applied Research Statistics	3 cr
DPT 757	Wound Care	2 cr*
DPT 725	Evidenced-Based Clinical Practice	2 cr

Total Semester Credit Hours: 17

Spring Semester Second Year

DPT 755	Geriatric and Pediatric Rehabilitation	3 cr
DPT 787	Integrated Rehabilitation	3 cr
DPT 721	Advanced Topics in Physical Therapy	2 cr
DPT 750	Prosthetics and Orthotics	3 cr*
DPT 788	Spine Examination and Intervention	3 cr
DPT 751	Women's Health in Physical Therapy	2 cr

Total Semester Credit Hours: 16

Summer Semester Third Year (Both Sessions)

DPT 772	Physical Therapy Administration	2 cr
DPT 774	Psychosocial Aspects of Physical Therapy	2 cr
DPT 758	Diagnostic Testing and Imaging	2 cr

Total Semesters Credit Hours: 6

Fall Semester Third Year

DPT 762	Supervised Clinical Education II	5 cr*
DPT 763	Supervised Clinical Education III	5 cr*

Total Semester Credit Hours: 10

Spring Semester Third Year

DPT 764	Supervised Clinical Education IV	6 cr*
DPT 798	Directed Research	3 cr

Total Semester Credit Hours: 9

Total Curriculum Credit Hours: 111

* Course fee

Doctor of Physical Therapy

DPT 710 **1 credit**

Selected Topics in Physical Therapy

Forum to disseminate information to students on current and professional issues in physical therapy. Prerequisite: Graduate standing in physical therapy.

DPT 711 **1 credit**

Medical Terminology

Introduction to medical terminology for the healthcare professional. Students expand their medical vocabulary via immersion in medical content and subjects from a broad spectrum of body systems. Prerequisite: Graduate standing in physical therapy.

DPT 720 **2 credits**

Professional Development

Theories and experiences designed to develop skills to accurately, sensitively and assertively communicate with patients, families, and colleagues. Principles of written and oral communication. Professional issues of changes in health care, state and local laws, standards of practice, code of ethics, quality assessment and quality assurance. Prerequisite: Graduate standing in physical therapy.

DPT 721 **Advanced Topics in Physical Therapy** **2 credits**
Forum to disseminate information on advanced aspects of clinical practice, ethics, and professional conduct related to physical therapy. Prerequisite: DPT 710.

DPT 722 **1 credit**
Issues in Rural Health
Unique needs of frontier/rural and underserved populations addressed, emphasizing the eclectic nature of practice in these areas, the importance of networking with other disciplines, and special considerations of these populations including functional rehabilitation, time management, travel, emergencies, and involvement of families in treatment. Prerequisite: Graduate standing in physical therapy.

DPT 725 **2 credits**
Evidenced Based Clinical Practice
Synthesis of didactic material and critical review of the literature combined for effective treatment applications. Complex patient assessment and treatment across all areas emphasizing multifaceted evidence-based rationale for all treatment approaches. Prerequisite: Graduate standing in physical therapy.

DPT 730 **4 credits**
Foundations of Observation and Assessment
Basic patient assessment skills with introduction to posture and gait evaluation through observation. Patient history and review of the medical record. Documentation in S.O.A.P. Note and functional outcome formats. Assessment skills emphasized include: anthropometric measures, reflex and sensation testing, goniometry, manual muscle testing, vital signs, and surface palpation. Prerequisite: Graduate standing in physical therapy.

DPT 732 **3 credits**
Therapeutic Exercise
Holistic approach to evaluation and management of patients with various orthopaedic pathologies and dysfunctions. Emphasis placed on theoretical basis of specific functional skills interrelated with clinical decision-making methodology leading to safety awareness and proper body mechanics. Exposure to community/work reintegration and home exercise program instruction. Prerequisite: Graduate standing in physical therapy.

DPT 735 **2 credits**
Functional Training
Performance and application of positioning skills, transfers techniques, and assistive devices. Advancement to clinical decision-making skills and incorporation of learned materials into therapy interventions. Clinical reasoning and critical analysis skills in assessment, treatment design and intervention, goal development and discharge planning for patient's with spinal cord injuries. Prerequisites: DPT 744, DPT 745, DPT 730.

DPT 741 **3 credits**
Orthopaedic Principles
Principles of orthopaedic physical therapy including biomechanics, applied anatomy, and osteokinematic and arthrokinematic concepts examined. Musculoskeletal system investigated from histological, structural, and functional perspectives. Prerequisite: Graduate standing in physical therapy.

DPT 742 **5 credits**
Clinical and Pathological Physiology
Fundamentals of physiology and pathology related to diseases causing abnormal movement patterns or capabilities. Processes and diseases most frequently encountered in physical therapy practice emphasized. Prerequisite: Graduate standing in physical therapy.

DPT 744 **3 credits**
Gross Anatomy I
Study of gross human anatomy as it applies to physical therapy. Materials to be covered include: muscle, tendon, ligament and nerve innervation of the trunk and upper extremity, structural identification and function of the spine, heart, lungs, abdominopelvic organs, circulatory and sensory systems. Emphasis on relevance of gross anatomy to physical therapy practice. Involves both lecture and laboratory dissection that will cover the upper half of the body. Prerequisite: Graduate standing in physical therapy.

DPT 745 **3 credits**
Gross Anatomy II
Study of gross human anatomy as it applies to physical therapy. Materials to be covered include: muscle, tendon, ligament and nerve innervation of the head, neck, and lower extremity, structural identification and function of the corresponding circulatory and sensory systems. Prerequisite: DPT 744.

DPT 746 **4 credits**
Neuroanatomy
High level immersion into the anatomy of the nervous system, emphasizing structure and functional relationships. Relates structural relationships of the central and peripheral nervous systems to brain dysfunction and pathology. Prerequisite: Graduate standing in physical therapy.

DPT 748 **2 credits**
Pharmacology
Actions and effects of pharmaceutical agents commonly encountered in physical therapy clinical practice. Prerequisite: Graduate standing in Physical Therapy.

DPT 749 **3 credits**
Applied Exercise Physiology
Overview of physiologic responses of the human body to acute bouts of exercise and how exercise training leads to chronic adaptations of selected systems. Prerequisite: Graduate standing in physical therapy.

DPT 750 **3 credits**
Prosthetics and Orthotics

Evaluation of medical, surgical and prosthetic and rehabilitation management of amputations. Design, fabrication and fitting of prosthetic devices as well as general orthotics principles examined. Basic clinical problem solving skills integrated in the context of prosthetic and orthotic management of patients. Prerequisite: Graduate standing in physical therapy.

DPT 751 **2 credits**
Women's Health in Physical Therapy

Overview of the anatomical, physiological, nutritional, psychological, and sociological influences throughout the woman's life span including: adolescence, the reproductive years, the middle years, the older age. Discussion of physical therapy management of musculoskeletal, integumentary, cardiopulmonary, and visceral pathologies common to women. Prerequisite: Graduate standing in physical therapy.

DPT 752 **2 credits**
Physical Agents

Biological effects of injury and repair, clinical application of soft tissue techniques, thermal agents, intermittent compression, continuous motion, and mechanical traction. Advancement to clinical decision-making skills and treatment program planning stressed. Prerequisite: DPT 742.

DPT 753 **2 credits**
Electrotherapy

Principles of a electrophysics and neurophysiology as they pertain to the use of therapeutic electrical stimulation. Application techniques of various electrical stimulation devices also presented. Prerequisite: DPT 742, DPT 752, DPT 730, DPT 732.

DPT 754 **4 credits**
Orthopaedic Assessment in Physical Therapy

Evaluation and assessment of upper and lower extremity orthopaedic problems. Functional anatomy, biomechanics, and evaluative manual therapy skills used to functionally diagnose orthopaedic pathologies and disorders. Prerequisites: DPT 730, 741, and 744.

DPT 755 **3 credits**
Geriatric and Pediatric Rehabilitation

Examination of factors affecting normal and pathologic systems from birth into aging. Issues include normal developmental sequences and common pathologies across the life span. Evaluation, wellness and leisure activities, and how basic rehabilitation procedures can be modified for the elderly. Prerequisite: Graduate standing in physical therapy.

DPT 756 **4 credits**
Neurophysiology

High level immersion into the function of the human central and peripheral nervous systems based on current research and theory. Topics include normal human motor and sensory neurophysiology, cognitive and learning neurophysiology, neuropathophysiology, neuroplasticity, neurodiagnostics and neurologic treatment options. Prerequisite: DPT 746.

DPT 757 **2 credits**
Wound Care

Clinical practice of wound care including physiology of tissue healing, wound assessment tools, dressings and treatment approaches. Processes and diseases most frequently encountered in physical therapy practice specializing in wound care. Prerequisites: DPT 742, DPT 752.

DPT 758 **2 credits**
Diagnostic Testing and Imaging

Presentation of diagnostic tests used by disciplines and specialties within and outside of the profession of physical therapy. Discussion of blood studies, nuclear medicine studies, and radiologic/X-ray studies. Interpretation of test results as it applies to physical therapy evaluation, intervention planning and treatment. Prerequisite: Graduate standing in physical therapy.

DPT 761 **3 credits**
Supervised Clinical Education I

The first clinical affiliation is a supervised full-time extended clinical learning experience six weeks in duration. The primary purpose is to provide students with the opportunity to actively engage in learning in order to develop introductory clinical competence in the delivery of services to persons with movement dysfunction. Prerequisite: Successful completion of all course work in the first year of the graduate physical therapy program.

DPT 762 **5 credits**
Supervised Clinical Education II

The second clinical affiliation is a supervised, full-time extended clinical learning experience 11 weeks in duration. The primary purpose is to provide students with the opportunity to actively engage in experiential learning in order to advance clinical competence in the delivery of services to persons with movement dysfunction. Prerequisite: DPT 761.

DPT 763 **5 credits**
Supervised Clinical Education III

The third clinical affiliation is ten and one-half weeks and is a supervised full-time extended clinical learning experience. The primary purpose is to provide students with the opportunity to actively engage in experimental learning in order to advance clinical competence in the delivery of services to persons with movement dysfunction. Prerequisite: DPT 762.

DPT 764 **Supervised Clinical Education IV** **6 credits**

The fourth clinical affiliation is twelve weeks and is a supervised full-time extended clinical learning experience. The primary purpose is to provide students with the opportunity to actively engage in experiential learning in order to advance clinical competence in the delivery of services to persons with movement dysfunction. Prerequisite: DPT 763.

DPT 765 **Clinical Education V** **4 credits**

This nine-week clinical affiliation is an extended learning experience for students completing the transitional physical therapy doctorate. The primary purpose is to provide students the opportunity to advance clinical competence in the delivery of physical therapy services to persons with movement dysfunction. Prerequisite: Successful completion or concurrent work in all course work to date in the transitional doctorate physical therapy program.

DPT 770 **Cardiopulmonary Rehabilitation** **2 credits**

Evaluation and treatment of patients with acute and chronic cardiopulmonary disease and dysfunction. Emphasis on regulation of cardiac, circulatory and pulmonary functions at rest and the responses of these systems to differing modes, intensities, and durations. Prerequisite: Graduate standing in physical therapy.

DPT 772 **Physical Therapy Administration** **2 credits**

General principles of organizations and administration that impact the ethical and legal aspects of physical therapy practice. Topics include budget development, cost accounting, supervision, communication skills, evaluative techniques, and methods of management and quality assurance. Prerequisite: Graduate standing in physical therapy.

DPT 774 **Psychosocial Aspects of Physical Therapy** **2 credits**

Social and psychological issues which arise during illness examined and discussed in an open class discussion format. Emphasis on self-awareness as well as awareness of others with respect to cultural differences, religious beliefs, addictions, and coping strategies during stress. Prerequisite: Graduate standing in physical therapy.

DPT 785 **Orthopaedic Rehabilitation** **3 credits**

Manual therapy and therapeutic exercise techniques for the extremities with emphasis on specifically integrating these techniques into treatment regimes for specific orthopaedic pathologies and disorders. Students review, integrate, and enhance knowledge from previous course work as it pertains to appropriate entry-level manual skill application. Prerequisites: DPT 732, DPT 741, DPT 754.

DPT 786 **Neurological Rehabilitation** **3 credits**

Fosters clinical reasoning and critical analysis skills in assessment, treatment design and intervention, goal development and discharge planning for neurologically impaired individuals. Students exposed to theoretical applications of neurological function and treatment and are expected to incorporate professional behavior, scientific and clinical knowledge. Prerequisites: DPT 730, DPT 732, DPT 744, DPT 745, DPT 746, DPT 756.

DPT 787 **Integrated Rehabilitation** **3 credits**

Assessment and treatment of advanced orthopedics, advanced neurological, and spinal cord injured patients utilizing comprehensive techniques for spinal cord injury (SCI), orthopedics, and neurological treatment. Through dynamic patient case problems, students evaluate, plan, and implement course of treatment. Prerequisites: DPT 785, DPT 786.

DPT 788 **Spine Examination and Treatment** **3 credits**

Review of spine examination including biomechanics, observation, range of motion, muscle synergy, joint play and special tests. Inclusion of examination schema and differential diagnosis of commonly seen spine pathology. Emphasis on hands-on examination, assessment, and treatment of spine dysfunction. Prerequisite: Graduate standing in physical therapy.

DPT 790 **Clinical Research in Physical Therapy** **3 credits**

Introduction to principles and concepts of clinical research in physical therapy. Covers development of the research question, measurement issues, statistical analysis, literature review, and writing of results. Prerequisite: Graduate standing in physical therapy.

DPT 791 **Applied Research Statistics** **3 credits**

Review of foundations, concepts of measurement, and design in clinical research. Emphasis on hands-on data analysis of clinically relevant physical therapy research designs including descriptive statistics, statistical inference, analysis of differences, and analysis of relationships. Prerequisite: Graduate standing in physical therapy.

DPT 795 **Independent Study** **1-6 credits**

Students pursue a topic related to physical therapy beyond that covered in the graduate curriculum. Satisfactory completion accomplished through individualized, self-directed study. Topics based on student preference and faculty approval. Faculty and student jointly determine goals, objective and evaluation methods. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in physical therapy.

DPT 798 **1-6 credits**
Directed Research

Critical inquiry by participating in new or ongoing research with faculty who serve as project advisors. Students summarize research by a written report and present each project orally to the faculty and area clinicians. May be repeated to a maximum of six credits. Prerequisite: DPT 790.

Physical Therapy

PTS 720 **1 credit**
Selected Topics in Physical Therapy

Current and professional issues in physical therapy. Prerequisite: Graduate standing in physical therapy.

PTS 721 **1 credit**
Advanced Topics in Physical Therapy

Information on advanced aspects of clinical practice, ethics, and professional conduct related to physical therapy. Prerequisite: PTS 720.

PTS 722 **1 credit**
Issues in Rural Health

Unique needs of frontier and rural populations addressed. Emphasis placed on the eclectic nature of rural physical therapy, the importance of networking with other disciplines, functional rehabilitation, time management, travel considerations, dealing with life-threatening emergencies on the frontier, and family members in planning treatment goals. Prerequisite: Graduate standing in physical therapy.

PTS 730 **3 credits**
Foundations of Observation and Assessment

Basic patient assessment skills with introduction to posture and gait evaluation through observation. Patient history and review of the medical record. Documentation in S.O.A.P. note and narrative format. Assessment skills emphasized include anthropometric measures, reflex and sensation testing, goniometry, manual muscle testing, vital signs, and surface palpation. Prerequisite: Graduate standing in physical therapy.

PTS 732 **3 credits**
Therapeutic Exercise and Functional Training

Holistic evaluation and management of patients with orthopaedic pathology and related dysfunction. Theoretical basis of specific therapeutic exercise and functional training skills interrelated with clinical decision-making methodology. Treatment rationale, safety awareness and proper body mechanics emphasized. Prerequisites: PTS 730, PTS 740, PTS 744; Corequisite: PTS 754, PTS 756.

PTS 741 **2 credits**
Orthopaedic Principles

(Formerly PTS 740). Principles of orthopaedic physical therapy including biomechanics, applied anatomy, and osteokinematic and arthrokinematic concepts examined. Musculoskeletal system investigated from histological, structural, and functional perspectives. Prerequisite: Graduate standing in physical therapy.

PTS 742 **4 credits**
Pathophysiology

Fundamentals of physiology and pathology related to diseases causing abnormal movement patterns or capabilities. Processes and diseases most frequently encountered in physical therapy practice emphasized. Prerequisite: Graduate standing in physical therapy.

PTS 744 **5 credits**
Gross Human Anatomy

Gross human anatomy of axial and appendicular skeleton including autonomic nervous system, lymph, circulatory and sensory systems, head, neck trunk, spine, heart, lungs, abdominopelvic organs, pelvic floor muscles and extremities. Emphasis on relevance to physical therapy practice. Lecture and human dissection. Prerequisite: Graduate standing in physical therapy.

PTS 746 **4 credits**
Neuroanatomy

Examination of anatomy of the nervous system, emphasizing structure-function relationships. The brain, spinal cord, cranial nerves, tracts and nuclei studies to provide students with an understanding of the anatomical structure of the brain, how neural systems participate in perception, control of movement, vegetative functions and higher cognitive functions. Prerequisite: Graduate standing in physical therapy.

PTS 748 **2 credits**
Pharmacology in Physical Therapy

Actions and effects of pharmaceutical agents commonly encountered in physical therapy clinical practice. Prerequisite: Graduate standing in physical therapy.

PTS 750 **2 credits**
Prosthetics and Orthotics

Evaluation of medical, surgical and prosthetic and rehabilitation management of amputations. Design, fabrication and fitting of prosthetic devices as well as general orthotics principles examined. Basic clinical problem solving skills integrated in the context of prosthetic and orthotic management of patients. Prerequisites: PTS 730, 740, and 732.

PTS 751 **3 credits**
Women's Health in Physical Therapy

Ob/gyn assessment skills for the physical therapist and treatment planning for obstetric or gynecological patient. Includes anatomic and physiologic changes of pregnancy, pregnancy-induced pathology, high-risk pregnancy, cesarean, childbirth, gynecological pathology, incontinence, pelvic pain and pelvic floor dysfunction. Prerequisite: Graduate standing in physical therapy.

PTS 752 **3 credits**
Physical Agents

Biological effects of injury and repair, clinical application of soft tissue techniques, thermal agents, intermittent compression, continuous motion, and mechanical traction. Advancement to clinical decision-making skills and treatment program planning stressed. Prerequisite: PTS 742.

PTS 753 **2 credits**
Electrotherapy

Principles of a electrophysics and neurophysiology as they pertain to the use of therapeutic electrical stimulation. Application techniques of various electrical stimulation devices also presented. Prerequisite: PTS 742.

PTS 754 **4 credits**
Orthopaedic Assessment in Physical Therapy

Evaluation and management of specific orthopaedic problems. Functional anatomy, biomechanics and evaluative therapeutic skills specifically integrated into treatment regimes. Prerequisites: PTS 730, 740, and 744.

PTS 755 **3 credits**
Rehabilitation Across the Life Span

Examines factors affecting normal systems from birth through adulthood and into aging. Infancy and childhood issues include normal developmental sequences, hormonal changes, social issues, and common injuries. Geriatric issues focus upon normal and pathologic changes, evaluation, wellness and leisure activities, and modification of basic rehabilitation procedures for the elderly. Prerequisites: PTS 732, 746, 756.

PTS 756 **4 credits**
Neurophysiology

Central, peripheral, autonomic system and the physiological and behavioral responses to environmental stimuli. Neurophysiology and neurobehavior in normal and altered states studied as well as the effects of motor control, motor learning and the learning environment on neural substrates and plasticity. Prerequisite: PTS 746.

PTS 761 **2 credits**
Supervised Clinical Education I

First clinical affiliation lasting five weeks. Introductory clinical experience providing the student with opportunities to practice various skills in evaluation and treatment of patients under supervision. S/F only. Prerequisite: Graduate standing in physical therapy.

PTS 762 **4 credits**
Supervised Clinical Education II

More advanced clinical affiliations each lasting eight weeks. Students advance in progressing the patient through various phases of physical therapy in a variety of settings including acute, rehabilitation, and outpatient care under supervision in preparation for assuming the role of a qualified physical therapist. S/F grading only. Prerequisite: Graduate standing in physical therapy.

PTS 763 **4 credits**
Supervised Clinical Education III

More advanced clinical affiliations each lasting eight weeks. Students advance in progressing the patient through various phases of physical therapy in a variety of settings including acute, rehabilitation, and outpatient care under supervision in preparation for assuming the role of a qualified physical therapist. S/F grading only. Prerequisites: Graduate standing in physical therapy.

PTS 764 **5 credits**
Supervised Clinical Education IV

More advanced clinical affiliations each lasting eight weeks. Students advance in progressing the patient through various phases of physical therapy in a variety of settings including acute, rehabilitation, and outpatient care under supervision in preparation for assuming the role of a qualified physical therapist. S/F grading only. Prerequisite: Graduate standing in physical therapy.

PTS 770 **2 credits**
Professional Development

Professional socialization of students through analysis of written and verbal communication skills, changes in health care, standard of practice, Code of Ethics and value systems held by oneself and others. Techniques to accurately, sensitively and assertively communicate with patients, families, and colleagues taught through class discussion, assignment and self-reflection. Prerequisite: Graduate standing in physical therapy, PTS 780 .

PTS 772 **2 credits**
Physical Therapy Administration

General principles of organizations and administration that impact the ethical and legal aspects of physical therapy practice. Topics include budget development, cost accounting, supervision, communication skills, evaluative techniques, and methods of management and quality assurance. Prerequisites: PTS 720, 721 and 770.

PTS 774 **2 credits**
Psychosocial Aspects of Physical Therapy

Examination of social and psychological issues which arise during illness. Emphasis on self-awareness, awareness of others with respect to cultural differences, religious beliefs, coping strategies during stress and issues of sexuality. Prerequisite: PTS 770.

PTS 776 **3 credits**

Advanced Therapeutic Exercise

Principles of advanced therapeutic exercise emphasizing assessment and treatment of common neuromusculoskeletal conditions as seen in the physical therapy clinic setting. Emphasis placed on finding and incorporating the most recent techniques as demonstrated in the research literature. Prerequisites: PTS 741, PTS 754, PTS 785, PTS 786.

PTS 782 **4 credits**

Cardiopulmonary and Exercise Physiology

Evaluation and treatment of patients with acute and chronic cardiopulmonary disease and dysfunction. Overview of physiologic response of the human body to acute bouts of exercise and chronic adaptations of selected systems to exercise training. Laboratory instruction of quantitative measurements of cardiopulmonary, circulatory and metabolic function. Prerequisites: PTS 732, 742, and 744.

PTS 785 **3 credits**

Orthopaedic Rehabilitation

Manual therapy techniques for the spine and extremities with emphasis on examination and treatment for orthopaedic pathologies. Students review, integrate, and enhance knowledge from previous course work as it pertains to appropriate entry-level manual skill application. Prerequisites: PTS 732,740, and 754.

PTS 786 **3 credits**

Neurological Rehabilitation

Fosters clinical reasoning and critical analysis skills in assessment, treatment design and intervention, goal development, and discharge planning for neurologically impaired individuals. Via exposure to theoretical applications of neurological function and treatment, students expected to incorporate and apply these skills in a laboratory setting. Prerequisites: PTS 732, 744, 746, and 756.

PTS 787 **4 credits**

Integrated Rehabilitation

Assessment and treatment of advanced orthopedics, advanced neurological, and spinal cord injured patients utilizing comprehensive techniques for SCI, orthopedics, and neurological treatment. Through dynamic patient case problems, students evaluate, plan, and implement course of treatment and reassess results. Prerequisites: PTS 785 and 786.

PTS 788 **3 credits**

Spine Examination and Intervention

Advanced assessment and treatment techniques of the cervical, thoracic, lumbar spines to include the pelvis and sacroiliac joints. The lab portion designed to allow students to obtain hands-on training in these techniques. Prerequisites: PTS 741, PTS 742, PTS 754, PTS 785.

PTS 790

Clinical Research in Physical Therapy **2 credits**

Introduction to the principles and concepts of clinical research in physical therapy. Emphasis on the development of a research question, measurement issues, experimental design, computer based statistical analysis, critical review of research literature and proposal presentation. Prerequisite: Graduate standing in physical therapy.

PTS 795 **1-3 credits**

Independent Study

Students pursue a topic related to physical therapy beyond that covered in the graduate curriculum. Satisfactory completion accomplished through individualized, self-directed study. Topics based on student preference and faculty approval. Faculty and student jointly determine goals, objective and evaluation methods. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PTS 798 **1-3 credits**

Directed Research

Critical inquiry through participation in new or on-going projects with faculty or area clinicians. Student and instructor work together to identify a scope of work and specifications for contractually agreed upon due dates. All students summarize their own research of the portion of the project in which they participated. May be repeated to a maximum of six credits. Prerequisites: PTS 790.

School of Nursing

Dean

Yucha, Carolyn (2004), Professor; B.S.N., SUNY, Buffalo; Ph.D., SUNY Health Sciences Center, Syracuse.

Senior Academic Coordinator

Witt, Rosemary (1971), Associate Professor; B.S.N., University of Iowa; M.N., University of Washington; Ph.D., University of Texas, Austin.

Physiological Nursing Coordinator

Miller, Sally (2002), Assistant professor; B.S.N., M.S., Rutgers University; Ph.D., Walden University.

Psychosocial Nursing Coordinator

Candela, Lori (1999), Assistant Professor; B.S.N., Metropolitan State College; M.S., University of Colorado; Ed.D., University of Southern California.

Graduate Coordinator

Alpert, Patricia (1991), Instructor; B.S.N., M.S.N., M.P. H. University of Hawaii, DrP.H.(c) Loma Linda University.

Graduate Faculty

Bowles, Cheryl (1984), Professor; B.S.N., M.S.N., University of Illinois; Ed.D., Northern Illinois University.

Bondmass, Mary (2004), Assistant Professor; B.S.N., M.S.N., Loyola University; Ph.D., University of Illinois, Chicago.

Colosimo, Roseann (2001), Assistant Professor; B.S.N., St. John College, M.S.N., Catholic University; Ph.D., Ohio State University.

Cyrkiel, Dianne (2000), Lecturer; B.S.N. Indiana University; M.S.N. University of Texas, San Antonio.

Kowalski, Susan (1994), Associate Professor; B.S.N., Northern Illinois University; M.S.N., Boston College; M.B.A., Rockford College; Ph.D., Texas Woman's University.

Louis, Margaret (1978), Associate Professor; B.S., M.A., Bradley University; Ph.D., University of Texas, Austin.

Maes, Cheryl (2004), Lecturer; B.S.N., M.S.N., University of Nevada, Las Vegas.

McCarroll, Carolyn (1984), Professor; B.S.N., M.S.N., University of Utah; Ed.D., Brigham Young University.

The master's program has full accreditation by the National League for Nursing Accrediting Commission.

The Master of Science in Nursing Graduate program is designed to provide students pursuing a career in nursing the opportunity to acquire the knowledge, skills and abilities requisite to the safe, effective and efficient practice of nursing. The M.S.N. program currently offers the opportunity to become a nurse practitioner (NP) or a nurse educator. The Ph.D. in Nursing Graduate program is designed to meet two purposes: to prepare leaders as nurse educators who will meet the needs of the profession and society and to develop scholarly researchers who will advance knowledge about nursing education.

R.N. to M.S.N. Pathway

Registered nurses with an associate's degree or diploma in nursing enrolled in UNLV's R.N. to B.S.N. program are eligible to apply for admission in the graduate program after successfully completing specified courses (NURS 408, 410, 411, 426, 418, 446, 451) of upper-division nursing course work. Applicants must meet all current requirements of admission into one of the pathways in the graduate program. Successful applicants will be required to complete the university core requirements at the baccalaureate level if they have not yet done so. Applicants who are not accepted in the graduate program may complete the baccalaureate program in one additional semester of full-time study.

The Master of Science in Nursing Degree Program

The M.S.N. program currently offers two tracks; the Nurse Practitioner Track and the Nurse Educator Track.

The role of the nurse practitioner (NP) is that of direct care provider. NPs practice in clinics, long-term care facilities, hospitals, physician offices, managed care corporations and private industries. NPs perform health histories and physical examinations, order and interpret diagnostic tests, diagnose and manage acute and chronic diseases, prescribe medication and treatments, provide patient and family counseling and education regarding lifestyle behaviors and self-care skills and participate in research projects and integrate research findings. The NP blends some aspects of medicine with nursing, using a nursing perspective. When required by state law, as it is in Nevada, NPs have collaborative relationships with physicians. Credentialing examinations, designed by specialty area, are available and required prior to practice in most states.

The nurse educator track prepares the graduate for a faculty position within a program of nursing or a nurse educator position in a clinical setting. The student will increase mastery related to teaching and learning and evaluation strategies, curriculum design, and the use of educational technologies. Via directed study and mentorship with experienced faculty, students will enhance clinical expertise in a selected specialty area. Graduate students will have the opportunity to supervise basic nursing students in clinical practice areas and/or work with nurse educators in clinical settings in the preparation, delivery and evaluation of educational programs for nurses.

Objectives of the Master of Science Degree

Upon completion of the program the graduate will:

1. Utilize research to provide high quality health care, initiate change and improve nursing practice.
2. Incorporate nursing and other scientific theories (natural, social, educational organizational, and biological) into nursing practice.
3. Assume a leadership role in the management of human, fiscal, and physical resources.
4. Utilize knowledge of health care public policy to impact professional practice and health care delivery.
5. Incorporate knowledge of the total health care system into nursing practice.
6. Practice ethically in the conduct of research, management and clinical professional practice.
7. Function independently and collaboratively with other health care professionals.
8. Design and implement culturally competent health care.
9. Use epidemiological, social, and environmental data to draw inferences regarding the health status of selected client populations and define strategies to empower client populations in attaining and maintaining maximal functional wellness.
10. Actualize the advance practice roles of educator, researcher, advocate, clinician, consultant, collaborator and manager of systems.
11. Assume responsibility and accountability for the health promotion, assessment, diagnosis and management of client problems within a specialty area of clinical practice.
12. Accept responsibility for personal growth and professional development.
13. Communicate effectively within advanced practice roles to articulate ideas, facilitate relationships and achieve clinical outcomes.

Admission Requirements for the M.S.N.

Students are admitted to the program in the fall semester of each year based upon competitive selection. Students may enroll in selected (NURS 705, 706, and 713) classes as a non-degree student, but no more than seven credits of course work as a non-degree student will be accepted toward the degree.

Students make simultaneous application to the Graduate College and the School of Nursing.

1. Cumulative Grade Point Average (GPA) of 3.00 or a GPA of 3.00 in the last two years of undergraduate work. (Submit one copy of official transcripts from all previous college and professional schools to the Graduate College and one copy to the school). The undergraduate nursing course work must have been completed at a nursing program accredited by the National League for Nursing Accrediting Commission or Commission on Collegiate Nursing Education.
2. Completion of undergraduate courses in nursing research, physical assessment (as currently taught in the undergraduate program of nursing at UNLV), and a course in introductory statistics. All prerequisite courses must be completed with a grade of C (2.00) or better. It

is expected that students possess basic computer word processing skills. If not, the student should seek that content prior to enrollment.

3. Completion of a graduate statistics course within the last three years prior to enrollment in NURS 707.
4. Two letters of recommendation from former instructors or employers that speak to the applicant's potential to complete the graduate program must be submitted to the school. The individual writing the letter may utilize the form available from the Graduate College, which includes a release form for the student to sign. The evaluators should speak to the student's professional nursing competency, including application of theory, quality of patient care, independent judgment when appropriate; relationship with team members such as nurses, physicians, and others; leadership skills; and personal responsibility and accountability.
5. A current resumé or vita.
6. Current registration to practice as a professional nurse in Nevada. Students should submit a copy of their Nursing License with the word "copy" printed over the top.
7. Evidence of current health and malpractice insurance. Accepted applicants must, prior to enrollment, show proof of completion of the Hepatitis B Vaccine series, a titer indicating presumptive immunity, or a statement from a health care provider indicating that vaccination is contraindicated for health reasons and validation of a negative drug screen. Other immunization and health data requirements are identified in the student handbook.
8. A statement of approximately 300 words describing the student's professional goals and reason for seeking graduate education.
9. Students seeking admission to the FNP program must submit a resume or vita that demonstrates a minimum of one year clinical experience as a registered nurse within the three years immediately preceding admission to the program. It is recommended that the most recent year of practice be in an area directly related to the student's proposed pathway of study.
10. Students seeking admission into the Nursing Education Pathway are required to have completed one year of clinical practice prior to enrollment in the first nursing education practicum course.
11. Selection into one of the approved pathways is based upon the applicant's qualifications (academic and professional), applicant's strengths as compared to other applicants, and upon the number of available openings.

Transfer of Credit

The Graduate College evaluates transcripts and determines the credits acceptable to the university. The Graduate Admissions Committee determines the credits, which may be applied toward the satisfaction of degree requirements for the Master of Science in Nursing.

A limited number of graduate courses taken prior to admission to UNLV may be used in an advanced degree program. The courses must:

- a. Be approved by the Graduate Admissions Committee.
- b. Have been taken at an accredited institution.

- c. Have been completed with a grade of B or higher; B- is not acceptable.
- d. Upon recommendation of the Graduate Dean, be posted on the student's official UNLV transcript.
- e. Duplicate or excess credit is not counted toward a UNLV graduate degree.

The actual number of transfer credits accepted is determined when the Proposed Degree Program is filed after admission. No more than seven credits may be accepted. A six-year completion rule applies to all course work utilized in completion of the degree. The date of the first transfer class utilized to fulfill the degree requirements begins the allowed six year calendar years.

Graduates of Baccalaureate Programs from Foreign Countries

Since schools of nursing in foreign countries do not have the opportunity to achieve accreditation by the National League for Nursing Accrediting Commission or the Commission on Collegiate Nursing Education, students graduating from those schools will be exempt from meeting that one criterion for admission. Students will only be accepted on a full admission status, rather than a nonadmitted or provisional status.

Post-Master's Certificate

Individuals who already have a master's degree in nursing and meet the admission qualifications may complete a Post-Master's Certificate for a Family Nurse practitioner or a Nurse Educator. No degree will be awarded, but a certificate documenting completion of the course work will be provided and transcripts showing completion of the courses will be available.

Advisement

Academic faculty advisors are assigned to all entering students for program planning. At the time the student selects his/her examination committee, the committee chairperson becomes the student's official advisor. Students must complete the Proposed Program of Study Form by the end of the second semester of full-time study or the semester after they have achieved 16-20 credits.

Progression

To progress in the M.S.N. program students must:

- 1. Maintain a cumulative grade point average of 3.00 or above each semester enrolled.
- 2. Receive a grade of B (3.00) or above in all required cognate and nursing courses. If less than a B, for example a B- (2.70), is earned, the course must be repeated. The student must be in good standing to repeat a course and any required course may be repeated only one time. A student may register for a course only two times. A student who has registered for the same course twice and has withdrawn or received a grade less than B is ineligible for readmission unless approved by the SON Academic Council.
- 3. Complete a minimum of six semester hours in each calendar year.

- 4. Continuously register for a minimum of three semester hours of credit each semester while working on the thesis until completion. The three credits may be non-thesis credits, but a student must have a minimum of six credits of thesis credit prior to graduation.
- 5. Continuously register for three semester hours of credit each semester while completing the non-thesis option.

Graduation Requirements

1. Residency Credits

No more than three courses (maximum 7 credits) may be transferred into the program. The Graduate Admissions Committee must approve transfer credit.

- 2. Graduate courses with a 700 number or above may not be challenged for credit.

3. Six-Year Completion Rule

All degree requirements must be completed within six calendar years from the date of matriculation. No credit may be used in an advanced degree program for course work completed more than six calendar years immediately preceding the term in which all degree requirements are completed. Nurse Practitioner students must complete the degree requirements within one year after the final clinical practicum is completed. If the student does not complete all degree requirements within the one-year time frame, he or she will be required to enroll in NURS 733: Clinical Practicum each semester until graduation to maintain clinical skills.

- 4. An examination, oral or written, will be held following completion of course work for students enrolled in either the thesis or capstone option. The final examination must be held at least three weeks prior to the last day of instruction in the term in which the student plans to complete the degree requirements. Students completing a thesis will be required to hand in the final copy early in the semester in which they plan to graduate. More detailed information is provided in the student handbook.

Part-Time Study

Students may complete the Nursing Education track and the courses prior to the clinical sequence of the FNP track on a part-time basis, but must be cognizant of the six-year completion rule. Students entering the clinical sequence of the FNP track must enroll as full-time students. Due to the heavy clinical commitment in the FNP track, it is recommended that students work no more than two shifts per week.

Course requirements for Students in the Family Nurse Practitioner Track (45 credits)

NURS 703 Advanced Physical Assessment	3 cr
NURS 704 Pathophysiology for Advanced Nursing Practice	3 cr
NURS 705 Roles in Advanced Practice Nursing	1 cr
NURS 706 Nursing Theory and the Research Process	3 cr
NURS 707 Nursing Research Methods and Utilization	3 cr
NURS 713 Health and Public Policy	3 cr
NURS 730 Pharmacology for Advanced Practice	3 cr

NURS 749 Primary Care of the Family I	6 cr
NURS 759 Primary Care of the Family II	8 cr
NURS 769 Primary Care of the Family III	8 cr
NURS 752 Role of the Nurse Practitioner: Transition to Practice	2 cr
NURS 766 Capstone I	1 cr
NURS 796 Capstone II	1 cr

*Students may elect to do a thesis in place of the Capstone courses. However, thesis requirements include completion of six credits of thesis.

Course Requirements for Students in the Geriatric Nurse Practitioner Track (46 credits)

(This track is currently not being offered, but may be available in the future if there are sufficient numbers of qualified applicants.)

NURS 703 Advanced Physical Assessment	3 cr
NURS 704 Pathophysiology for Advanced Nursing Practice	3 cr
NURS 705 Roles in Advanced Practice Nursing	1 cr
NURS 706 Nursing Theory and the Research Process	3 cr
NURS 707 Nursing Research Methods and Utilization	3 cr
NURS 713 Health and Public Policy	3 cr
NURS 720 Functionality of the GNP Role	3 cr
NURS 730 Pharmacology for Advanced Practice	3 cr
NURS 740 The GNP Role in Wellness Management: Primary Prevention	6 cr
NURS 750 The GNP Role in Acute Illness Management: Secondary Prevention	6 cr
NURS 760 The GNP Role in Chronic Illness Management: Tertiary Prevention	8 cr
NURS 752 Role of the Nurse Practitioner: Transition to Practice	2 cr
NURS 766 Capstone I	1 cr
NURS 796 Capstone II	1 cr

*Students may elect to do a thesis in place of the Capstone courses. However, thesis requirements include completion of six credits of thesis.

Course Requirements for Students in the Pediatric Nurse Practitioner Track (51 credits)

(This track is currently not being offered, but may be available in the future if there are sufficient numbers of qualified applicants.)

NURS 703 Advanced Physical Assessment	3 cr
NURS 704 Pathophysiology for Advanced Nursing Practice	3 cr
NURS 705 Roles in Advanced Practice Nursing	1 cr
NURS 706 Nursing Theory and the Research Process	3 cr
NURS 707 Nursing Research Methods and Utilization	3 cr
NURS 713 Health and Public Policy	3 cr
NURS 730 Pharmacology for Advanced Practice	3 cr

NURS 731 Advanced Pediatric Health Assessment	1 cr
NURS 734 Primary Care in Pediatrics: The Well Child	5 cr
NURS 744 Primary Care in Pediatrics: Common Problems	5 cr
NURS 745 Nutrition in Primary Pediatric Care	2 cr
NURS 752 Role of the Nurse Practitioner: Transition to Practice	1 cr
NURS 753 Adolescent Health in Primary Care	1 cr
NURS 754 Primary Care in Pediatrics: Development and Behavioral Problems	5 cr
NURS 764 Primary Care in Pediatrics: Chronic Conditions	8 cr
NURS 752 Role of the Nurse Practitioner: Transition to Practice	2 cr
NURS 766 Capstone I	1 cr
NURS 796 Capstone II	1 cr

*Students may elect to do a thesis in place of the Capstone courses. However, thesis requirements include completion of six credits of thesis.

Course Requirements for Students in the Nursing Education Track (38 credits)

NURS 705 Roles in Advanced Practice Nursing	1 cr
NURS 706 Nursing Theory and the Research Process	3 cr
NURS 707 Nursing Research Methods and Utilization	3 cr
NURS 709 Teaching and Learning in Nursing Education	3 cr
NURS 710 Evaluation Strategies for Nurse Educators	3 cr
NURS 713 Health and Public Policy	3 cr
NURS 723 Specialty Focus for Nurse Educators	4 cr
NURS 724 Developing Curriculum for Nursing Education	3 cr
NURS 733 Nursing Education Practicum #1	3 cr
NURS 742 Advanced Nursing Informatics	2 cr
NURS 743 Nursing Education Practicum #2	4 cr
NURS 795 Research Utilization Project	6 cr
OR	
NURS 799 Thesis	6 cr

*Students have a choice of completing a Research Utilization Project or a Thesis.

Ph.D. in Nursing Program

The UNLV doctoral program in nursing is designed to meet two purposes: to prepare leaders as nurse educators who will meet the needs of the profession and society and to develop scholarly researchers who will advance knowledge about nursing education. These purposes shape both the content and the process of the program.

To achieve these purposes, the Ph.D. in Nursing Program addresses four outcomes.

Individuals who complete this doctoral program will be prepared for roles as nurse educators and scholars. Graduates will be able to:

1. Provide leadership in the advancement of nursing as an academic and practice discipline.
2. Conduct independent research that generates new knowledge regarding teaching and learning issues and teaching competencies appropriate to nursing education which results in quality patient care for diverse populations.
3. Develop, implement and evaluate innovative approaches to nursing education.
4. Engage in the advancement of the profession through service endeavors.

Program entrance requirements

Admission into the nursing doctoral program is contingent upon the qualifications of the applicant and the availability of positions. Students are admitted once a year in the fall. Applicants must have submitted all required materials by **March 15**.

Admission Requirements

1. Earned bachelor's and master's degrees in nursing from programs accredited by the National League for Nursing Accrediting Commission or the Commission on Collegiate Nursing Education; persons educated outside the United States need to demonstrate proof of equivalent education and advanced degrees.
2. Persons holding a bachelor's degree in nursing and master's degree in a health-related discipline from an accredited institution are eligible for admission but will need to successfully complete 10 additional credits from the MSN program prior to taking doctoral courses.
3. A minimal grade point average of 3.5 (4.0 = A) earned in a nursing or health-related master's program of study.
4. Successful completion of **graduate** course work in statistics and research.
5. Eligible for licensure as a Registered Nurse in Nevada and licensure must be completed before beginning the second semester in the program.
6. Applicants must present competitive scores on verbal, quantitative and analytic measures. The exam must have been taken within the last five years.
7. Three letters of recommendation are required from individuals who can evaluate the applicant's motivation, academic capability, scholarship potential, and personal goals for doctoral study in nursing.
8. Evidence of current health and malpractice insurance. Accepted applicants must, prior to enrollment, show proof of completion of the Hepatitis B Vaccine series, a titer indicating presumptive immunity, or a statement from a health care provider indicating that vaccination is contraindicated for health reasons and validation of a negative drug screen. Other immunization and health data requirements are identified in the student handbook.

9. Applicants must submit the following written materials for review:

- a. Two representative samples of scholarly work (e.g., thesis, demonstration project, publications, etc.).
- b. Written statement of personal career, educational and scholarship goals including identification of research interests. The applicant's research interests must be within the realm of our faculty expertise in order to pursue a doctoral degree in this program.
- c. Curriculum Vita or resume.

10. Applicants are required to participate in an interview with members of the Admissions Committee, either in person or by telephone.

Course Offerings

Doctoral courses offered by the School of Nursing are **web-based**. However, many of these courses are hybrid-type courses where students are required to be on campus for several concentrated face-to-face meetings (no more than three) in any given semester. These meeting times and dates are set in advance to allow students adequate time to plan their schedules and most likely occur on Friday and/or Saturday.

Residency

The doctoral program requires that students complete a residency requirement by attending **full-time on campus** for one semester. This semester occurs during the time when students are enrolled in the independent teaching practicum and seminar. This semester is mutually agreed upon between the faculty and the student at the time of admission to the doctoral program.

Program of Study

A minimum of 65 graduate credit hours is required. Students who have completed appropriate nursing education courses prior to admission will complete a reduced number of credits for a total of no less than 53 graduate credit hours. Students can enroll for either part-time or full-time study.

Nursing Ph.D. Course Work

All students will complete the following program of study in terms of major focal areas of the curriculum.

1. Core Nursing Education courses

NURS 770 History and Philosophy of Human Science	3 cr
NURS 771 Theory Development for Nurse Educators	3 cr
NURS 772 The Nurse Educator as Leader	3 cr
NURS 774 Educational Theory and Philosophy for Nursing	3 cr

2. Core Research Methods courses

NURS 780 Research Methods in Nursing Education	3 cr
NURS 785 Special Topics in Nursing Research	2 cr
Elective course in research	3 cr
NURS 789 Independent Study/ Elective course in Research	3 cr

3. Core Data Management courses

NURS 775	Statistical Methods for Nursing Research I	3 cr
NURS 776	Statistical Methods for Nursing Research II	3 cr
NURS 781	Qualitative Data Analysis Processes	3 cr

4. Nursing Education courses

NURS 709	Teaching and Learning in Nursing Education	3 cr
NURS 710	Evaluation Strategies for Nurse Educators	3 cr
NURS 724	Developing Curriculum for Nursing Education	2 cr
NURS 733	Nursing Education Practicum #1	4 cr
NURS 790	Independent Teaching Practicum Seminar	1 cr
NURS 791	Independent Teaching Practicum	8 cr

5. Independent Research Courses

NURS 794	Research Seminar	6 cr
NURS 798	Dissertation	6 cr

Credit Hours and Grade Point Average

A minimum of 65 graduate credit hours is required (students who have completed courses 709, 710, 724, and 733 in either their masters' or postmasters' education are required to complete a minimum of 53 credits of required course work). A grade point average of 3.0 must be maintained in all courses required for the degree; no grade less than B is acceptable for curricular completion of the program. Each student, upon admission, will be assigned an initial academic advisor who will plan the student's entire program of study for submission to the doctoral curriculum committee for approval. Approved courses will include those taught in other disciplines and must relate to the student's area of research.

Qualifying Examination: Test of Subject Matter of Program

All students are required to complete a written Qualifying Examination upon completion of the core courses of the program: NURS 770, NURS 771, NURS 772, NURS 774, and NURS 780. The purpose of the qualifying examination is to: 1. Evaluate the student's ability to incorporate knowledge regarding theory, philosophy and science in advancing the discipline of nursing; 2. Evaluate the student's ability to synthesize knowledge of theory and research in developing a scientific approach to nursing inquiry regarding nursing education. Students unable to pass the Qualifying Examination after a second attempt will not be able to continue in the program.

Progression and Policies

Initial advisors monitor the student's progress through the program of study. In addition, the Graduate Program Coordinator will monitor the student's progress, including adherence to all established policies of the Graduate College. After the student has selected a research topic, the student may either continue with the assigned initial advisor or request a change of advisor based on research focus and

needs. Upon faculty recommendation and Graduate College approval, the advisor will be changed.

Comprehensive Examination

Upon completion of all required course work other than dissertation and research seminar, each student must take a written Comprehensive Examination that will focus on those areas of knowledge most relevant to the student's dissertation topic. The Comprehensive Examination will be prepared and graded by the members of the student's selected advisory committee, with the advisor serving as committee chairperson and subsequent chairperson of the dissertation committee. In accordance with Graduate College policy, all members of the committee should have expertise in some aspect of the student's area of research concentration. Comprehensive examinations may only be repeated once and must be repeated within a year of the initial attempt. If a student fails a second attempt, the student will be released from the program.

Dissertation Prospectus

Upon successfully completing the comprehensive examination, the student submits a dissertation prospectus to his/her committee for approval. Once the prospectus is approved by the committee, the student submits a "Prospectus Approval Form" to the Graduate College. Upon completion of these requirements, the student achieves candidacy and can register for dissertation credits and begin independent study. The student's advisor and advisory committee are responsible for the student's progression through the dissertation.

Final Oral Examination

Upon completion of the dissertation, the student must pass a final oral examination which involves the successful defense of the dissertation study. All advisory committee members must be present for this examination and may question the student following presentation of the study. The defense will be scheduled and conducted in accordance with the Graduate College's policies for dissertation completion.

Nursing

NURS 703

3 credits

Advanced Physical Assessment

Focuses on expanding the skills necessary to do a comprehensive physical assessment. Emphasis on developing advanced techniques in history taking and physical examination to prepare the student for clinical course as a nurse practitioner. Correlation of assessment findings with pathophysiological processes to develop differential diagnosis presented. Prerequisite: Admission to Graduate Program or consent of instructor.

NURS 704 **3 credits**
Pathophysiology for Advanced Nursing Practice

Emphasis on physiologic mechanisms of disease from a cellular perspective. Cellular pathophysiology of disease as it translates into clinical signs and symptoms manifested by the patient. Physiology of growth and development and the physiology of aging as they contrast with pathophysiologic mechanisms of disease. Prerequisite: Admission into the graduate program in nursing or consent of instructor.

NURS 705 **1 credit**
Roles in Advanced Practice Nursing

Introduces specialty areas within advanced practice nursing. Differentiates between characteristics of each specialty area. Prerequisite: Consent of Graduate Program Advisor.

NURS 706 **3 credits**
Nursing Theory and the Research Process

Examines nursing theories/models and their role in practice research and education. Emphasizes the structure, building and testing of nursing knowledge. Discussion of the research process. Prerequisite: Graduate standing.

NURS 707 **3 credits**
Nursing Research Methods and Utilization

Examines qualitative and quantitative nursing research methods, research utilization and skills for critical evaluation of nursing research. Evaluation of research findings for evidence-based practice or thesis approach to scholarly inquiry also emphasized. Prerequisite: NURS 706.

NURS 709 **3 credits**
Teaching and Learning in Nursing Education

Analyzes traditional and alternative teaching and learning concepts applicable in schools of nursing and clinical agencies. Clinical specialty serves as context for course assignments. Prerequisite: Admission to the Graduate Nursing Program or Certificate Program for Nurse Educators.

NURS 710 **3 credits**
Evaluation Strategies For Nurse Educators

Develops formative/process and summative/outcome evaluations for patients, students, peers and programs using both traditional and alternative evaluation strategies. Experience in evaluating outcomes and processes of education within the context of nursing specialty area. Prerequisite: Admission to the Graduate Nursing Program or Certificate Program for Nurse Educators.

NURS 713 **3 credits**
Health and Public Policy

Examines selected health problems from a political, cultural, social, educational, environmental, economic and ethical perspective. Analysis of research and public policy relevant to the prevention, treatment and amelioration of the problems. Initiate change strategies to impact public policy related to the selected problems. Prerequisite: Consent of Graduate Program Advisor.

NURS 714 **3 credits**
Family Theory and Assessment in Primary Care:

Study of advanced and emerging theory in family nursing science, determinants of family health, and research in family systems in the context of society and culture. Emphasis on family as client. Applies theory to phenomena in family and child health. Prerequisite: Graduate standing.

NURS 720 **3 credits**
Functionality of the GNP Role

Focuses on roles of GNP as expert practitioner, educator, consultant, clinical researcher and systems manager in primary, secondary and tertiary practice settings. Uses bio-psycho-social, spiritual, cultural perspectives and epidemiology data to examine communication, developmental and intergenerational issues in the care of older adults. (3 hours/week practicum). Prerequisites: NURS 705 and acceptance into the Gerontological Nurse Practitioner pathway.

NURS 722 **3 credits**
Integrative Health Care

Exploration of healing and wholeness as a philosophy for advanced nursing practice. Examination and evaluation of healing modalities that can be utilized for health promotion and treatment of common health problems. Prerequisites: NURS 705, NURS 706.

NURS 723 **4 credits**
Specialty Focus for Nurse Educators

Advanced knowledge in nursing specialty area of choice. Under the direction of a nursing faculty mentor, examines interrelationships between theory, practice, and research within specialty area. Includes independent study lab and seminar. Prerequisite: Admission to the Graduate Nursing Program or Certificate Program for Nursing Educators.

NURS 724 **3 credits**
Developing Curriculum for Nursing Education

Develop curriculum for educational programs in schools of nursing and clinical agencies. Clinical specialty area and intended practice setting serve as context for course assignments. Prerequisite: Admission to the Graduate Nursing Program or Certificate Program for Nursing Educators.

NURS 727 **3 credits**
Nursing Management: Organizational Level

Analysis of theories and goals of nursing management, the processes and resources utilized for goal achievement, and the various systems which impact nursing care delivery. Prerequisites: NURS 706, 707, and 713.

NURS 730 **3 credits**
Pharmacology in Primary Care

Focuses on the clinical application of pharmacologic and pharmacy kinetics principles in the management of selected health problems of adults and children. Focuses on drugs commonly used for adults and children in primary care settings. Prerequisites: NURS 704.

NURS 731 **1 credit**
Advanced Pediatric Health Assessment (Lab)

Laboratory course in advanced concepts in the physical, social, cognitive and developmental assessment of infants, children and adolescents. Physical assessment specific to each age group studied. Students become certified in performing the Denver Developmental Screening Test (DDST). Other selected developmental screening tools also explored. Prerequisites: Concurrent enrollment and NURS 703, 704 and admission into PNP program.

NURS 733 **4 credits**
Nursing Practicum I

Applies strategies and concepts of the nurse educator role in a practice setting of choice and within the context of clinical specialty area. Prerequisites: NURS 709, NURS 710, and NURS 723.

NURS 734 **5 credits**
Primary Care in Pediatrics: The Well child

Theoretical and clinical basis for the age appropriate primary care of children in the context of the family. Advanced nursing assessment and interventions designed to promote the wellness of children aged 0 through adolescence. Focuses on the application of theories, concepts and research related to comprehensive health behavior, supervision and promotion. Includes screening anticipatory guidance and health promotion strategies. Nine hours of precepted practicum to focus on primary care. Prerequisites: Admission into the PNP program, NURS 703, 704 or concurrent enrollment and NURS 731.

NURS 740 **6 credits**
The GNP Role in Wellness Management: Primary Prevention

Theoretical and clinical basis of primary prevention for older adults. Focuses on concepts of health promotion, maintenance, screening, teaching, advocacy and financing. Exploration of essential nutrition needs, lifestyle and living patterns of non-institutionalized older adults. Clinical management includes algorithm, protocols and health maintenance flow sheets (12 hours/week practicum) Prerequisites: NURS 703, 704 720, and 730.

NURS 742 **2 credits**
Advanced Nursing Informatics

Analyze the use of computer and information science and systems to manage and process data, information and knowledge in nursing education. Nursing specialty serves as the context for course assignments. Prerequisite: Admission to the Graduate Nursing Program or Certificate Program for Nurse Educators.

NURS 743 **4 credits**
Nursing Education Practicum 2

Second practicum to apply and evaluate strategies and concepts of the nurse educator role in a practice setting of choice and within the context of clinical specialty area. Prerequisites: NURS 709, NURS 710, NURS 723 and NURS 733.

NURS 744 **5 credits**
Primary Care in Pediatrics: Common Problems

Research-based assessment, diagnosis, management and evaluation of common acute health problems affecting children from infancy through adolescence. Nine hours per week of precepted practicum. Prerequisites: NURS 731 and 734.

NURS 745 **2 credits**
Nutrition in Primary Pediatric Care

Focuses on the nutritional needs of children and adolescents. Examines normal nutrition assessment and intervention, the nutritional aspects of health promotion and nutritional needs in special circumstances. Prerequisites: Graduate standing and consent of instructor.

NURS 749 **6 credits**
Primary Care of the Family I

Theoretical and clinical bases of primary and secondary prevention for families across the lifespan. Focuses is on health maintenance, teaching, screening and clinical management of common acute health problems. Emphasis on wellness management, differential diagnoses and pharmacologic/non-pharmacologic treatment options. (15 hours/week clinical). Prerequisites: Completion of Pathophysiology/Advanced Physical Assessment, Basic Life Support Certification and current malpractice insurance.

NURS 750 **6 credits**
The GNP Role in Acute Illness Management: Secondary Prevention

Theoretical and clinical basis of secondary prevention (acute care) for older adults. Focuses on clinical management of common acute health problems encountered in an inpatient or outpatient setting, stressing differential diagnosis and pharmacologic/non-pharmacologic treatment options. Prerequisite: NURS 740.

NURS 752 **2 credits**
Role of the Nurse Practitioner

Assists the student in transitioning into the role of the practicing nurse practitioner. Focuses on ethical decision making, legal issues, various practice plans, billing, credentialing and legal certification requirements for practice. Prerequisites: Concurrent enrollment in NURS 769.

NURS 753 **1 credit**
Adolescent Health in Primary Care

Focuses on the unique health needs of the adolescent in the context of the family and society. Includes research-based assessment, diagnosis, treatment and evaluation of health problems experienced by adolescents. Risk behaviors and interventions studied and community resources explored. Prerequisites: NURS 744 and concurrent in NURS 754.

NURS 754 **5 credits**

**Primary Care in Pediatrics:
Developmental and Behavioral Problems**

Research-based assessment, diagnosis, management and evaluation of common developmental and behavioral problems affecting children and families. Nine hours of precepted clinical experience in primary care per week.

Prerequisite: NURS 744.

NURS 757 **3 credits**

Field Study in Nursing Management

Application and testing of existing theories and processes of management in the delivery of nursing services. Projects carried out under the guidance of a nursing faculty member, in collaboration with a preceptor in a clinical agency.

Prerequisite: NURS 727.

NURS 759 **8 credits**

Primary Care of the Family II

Theoretical and clinical basis for secondary and tertiary prevention interventions across the lifespan. Focuses on clinical management of common acute health problems. Students examine the individual, familial and societal impact of chronic and terminal illness. Emphasis on differential diagnosis, clinical management and identification/utilization of community resources (15 hours of clinical per week). Prerequisites: Successful completion of NURS 749/749L.

NURS 764 **8 credits**

Primary Care in Pediatrics: Chronic Conditions

Research-based assessment, diagnosis, management and evaluation of common developmental and behavioral problems affecting children and families. Nine hours of precepted clinical experience in primary care per week. Prerequisites: NURS 714, 744 and 754.

NURS 760 **8 credits**

**The GNP Role in Chronic Illness Management:
Primary, Secondary and Tertiary Prevention**

Focuses on chronic illness management of the older adult in primary, secondary and/or tertiary settings. Seminar presentations include research and practice protocols. Practicum involves increased independence under supervision of on-site preceptors and clinical instructor (15 hours/week practicum). Prerequisite: Successful completion of NURS 750.

NURS 762 **3 credits**

Integrative Health Care Practicum I

Development of skill in mind-body therapies. Exploration and evaluation of providers of complementary therapies in the community that enables the student to develop a knowledge base regarding appropriate therapies for common health problems. Prerequisite: NURS 722.

NURS 764 **8 credits**

Primary Care in Pediatrics: Chronic Conditions

Research based assessment, diagnosis, management and evaluation of common developmental and behavioral problems affecting children and families. Nine hours of precepted clinical experience in primary care per week. Prerequisites: NURS 714, 744, 754, and 766.

NURS 766 **1 credit**

Capstone Seminar I

Capstone seminar provides students with the opportunity to synthesize core and major coursework completed during the program of graduate study. Capstone seminar I, the first of two capstone credits, culminates in the submission of the first written draft of the capstone project. The capstone is fully developed in capstone II.

NURS 769 **8 credits**

Primary Care of the Family III

Focuses on continued clinical experiences and study related to clinical practice based on the knowledge and skills learned in previous courses. Students gain skill in providing care to families in primary health care settings. Students practice with increasing independence under the supervision of preceptors and clinical instructors (18 hours of clinical per week). Prerequisites: Successful completion of NURS 749/749L and 759/759L.

NURS 770 **3 credits**

History and Philosophy of Human Science

History of science, framed by philosophic assumptions; epistemological and ontological influences on ways of knowing in health care sciences, nursing knowledge; intervention and social outcomes explored. Prerequisite: Enrollment in nursing doctoral program.

NURS 771 **3 credits**

Theory Development for Nurse Educators

Theoretical Conceptualizations of nursing as framework for nursing education; methods and process of theory development within nursing as basis for educational practices and outcomes; evaluation of innovative theories and impact on knowledge generation and transmission. Prerequisite: Enrollment in doctoral program.

NURS 772 **3 credits**

The Nurse Educator as Leader

Leadership models as templates for nurse educator role and relationships; mentorship, service and knowledge dissemination as leadership activities; use of informatics as leadership resource; impact of diversity on ethical leadership practices. Prerequisite: Enrollment in the nursing doctoral program.

NURS 773 **3 credits**
Clinical Practicum

Designed for students who have completed all required courses except NURS 795/799. While completing degree requirements, students must continue clinical practices under supervision. May repeat up to three consecutive semesters. If enrolled for three semesters, the final clinical comprehensive exam must be retaken prior to graduation (8 hours of clinical per week, plus 1 hour of post conference/weekly). Prerequisites: NURS 760/760L or NURS 764/764L or NURS 769/769L.

NURS 774 **3 credits**
Educational Theory and Philosophy for Nursing

Explores traditional and contemporary philosophies and theories of education within the context of societal development. Examines the role of educational theory and philosophy within nursing education. Prerequisite: Enrollment in the nursing doctoral program.

NURS 775 **3 credits**
Statistical Methods for Nursing Research I: Univariate Methods

Designed to provide students with skills necessary to understand, interpret, and conduct descriptive and univariate analysis relevant to the field of nursing. Students will gain practical experience examining real-world data sets using SPSS software. Prerequisites: Enrollment in the nursing doctoral program; successful completion of introductory graduate level statistics course.

NURS 776 **3 credits**
Statistical Methods for Nursing Research II: Multivariate Methods

Focuses on multivariate methods useful for the field of nursing research. Students will be expected to complete a capstone project to explore and implement statistical methods likely to be part of their dissertation projects. Prerequisites: Enrollment in the nursing doctoral program; NURS 775 or equivalent.

NURS 780 **3 credits**
Research Methods in Nursing Education

Investigate and develop advanced skills in making critical decisions about applying and implementing qualitative, quantitative and mixed-method research designs. Initiate investigation of a nursing education problem and explore possible research strategies for a study of the problem. Prerequisite: Admitted to nursing doctoral program.

NURS 781 **3 credits**
Qualitative Data Analysis Processes

Study of range of approaches to management of qualitative data; exploration of criteria for validity and reliability of outcomes. Prerequisites: NURS 780, Enrollment in the Nursing Ph.D. Program.

NURS 785 **2 credits**
Special Topics in Nursing Research

Provides the student with an opportunity for an in-depth exploration of specific aspects of nursing research issues and approaches. Examples of topics include development of a grant proposal writing, scholarly writing for publication, and research proposal budget development. Prerequisites: NURS 780 and admission to doctoral program.

NURS 789 **3 credits**
Independent Study

Supervised student designed study project done in consultation with instructor; must be submitted in writing to student advisor and graduate program coordinator for approval. Prerequisites: Enrollment in nursing doctoral program, NURS 770, 771, 772, 780.

NURS 790 **1 credit**
Independent Teaching Practicum Seminar

Exploration in group settings of actual experiences and outcomes of independent teaching practicum. Options for enhanced personal performance as nurse educator will be discussed. Must be taken concurrently with NURS 791. Prerequisites: NURS 724, NURS 733 and enrollment in nursing doctoral program.

NURS 791 **8 credits**
Independent Teaching Practicum

Integrate knowledge and competencies of nurse educator through application in independently taught undergraduate nursing course; systematic exploration of roles, responsibilities, and opportunities inherent in practice of nursing education. Prerequisites: NURS 724, NURS 733 and enrollment in nursing doctoral program.

NURS 794 **3 credits**
Research Seminar

Practical exploration in group setting of progress toward completion of independent dissertation research; problem-solving and identification of options in research emphasized. Taken concurrently with NURS 798. Only six credits of Research Seminar apply to program requirements. Enrollment must be continuous. Prerequisites: Enrollment in nursing doctoral program and consent of instructor.

NURS 795 **3 credits**
Research Utilization Project

Identify a clinically based problem in area of nursing practice. Evaluate extent current practice deviates from research based practice. Design, implement and systematically evaluate a research-based innovation project. May be repeated, but only six credits may be applied to the student's program. Prerequisites: NURS 706, 707. S/F grading only.

NURS 796 **1 credit**

Capstone Seminar II

Capstone seminar II provides students with the opportunity to complete the development of the graduate program capstone project initiated in seminar I. The final written project will be submitted for grading, and the project will be presented orally to the student's advising committee and any interested parties. Prerequisite: NURS 766.

NURS 797 **1-3 credits**

Selected Topics in Nursing

Graduate seminar focusing on current developments in nursing practice. Topics vary each semester. Prerequisites: Admission to graduate program and consent of instructor. May be taken to a maximum of six credits.

NURS 798 **3 credits**

Dissertation

Research analysis and writing toward completion of dissertation and subsequent defense. Only six credits apply to program requirements. Enrollment must be continuous.

NURS 799

Thesis

May be repeated, but only six credits may be applied to the student's program. S/F grading only. Prerequisites: NURS 706, 707.

The following courses have been approved for graduate credit. Full descriptions of these courses may be found in the UNLV *Undergraduate Catalog* under the corresponding 400 number.

NURS 622 AIDS: An Interdisciplinary Perspective
NURS 654 Introduction to Forensic Nursing
NURS 675 Nursing Systems Management
NURS 676 Introduction to Nursing Case Management
NURS 677 Nursing Case Management Systems

School of Public Health

The School of Public Health is committed to preparing students to meet the critical need for public health professionals in Nevada, the nation, and the world.

We provide an excellent program with a variety of areas for concentration and the opportunity for applied research. The School of Public Health has a special interest in community-based participatory research.

Interim Dean

Guinan, Mary (2004) Professor of Epidemiology and Community Health; M.D., Johns Hopkins University; Ph.D., University of Texas.

Graduate Coordinator

Gerstenberger, Shawn (1997) Associate Professor of Environmental Health; B.S. University of Wisconsin-Platteville; M.S., Ph.D., University of Illinois.

Graduate Faculty

Bungum, Timothy (2001) Associate Professor and Chair of Health Promotion; B.A. Luther College; M.S., D.P.H. University of South Carolina.

Chino, Michelle (2000) Associate Professor, B.S., M.S., Ph.D., University of New Mexico.

Cochran, Christopher (1997) Associate Professor of Health Care Administration; B.A. University of Texas, El Paso; M.P.A., Ph.D., University of South Carolina.

Cross, Chad (2005) Associate Professor of Biostatistics and Epidemiology; B.S., Purdue University, M.S., Ph.D., Old Dominion.

Ginn, Gregory (2000) Assistant Professor of Health Care Administration; B.A., M.Ed., Ph.D., University of Texas, Austin.

Ferguson, Paul W. (1999), Professor, Senior Vice Provost and Dean of the Graduate College; B.A., Whittier College; Ph.D., University of California, Davis. Ginn, Gregory (2000) Assistant Professor of Health Care Administration; B.A., M.Ed., MBA, Ph.D., University of Texas, Austin.

Henry, Jean (1998) Associate Professor and Chair of Health Promotion; B.S. Texas A&M University; M.A. Michigan State University; Ph.D., Texas Women's University.

McNab, Warren (1979) Professor of Health Promotion; B.S., M.S. Mankato State University; Ph.D., Southern Illinois University.

Moseley, Charles (1991) Associate Professor of Health Care Administration; Ph.D., Virginia Commonwealth University.

Papenfuss, Richard (1999) Associate Professor of Health Promotion; B.S., M.S. Winona State University; Ph.D., University of Utah.

Regin, Charles (1987) Assistant Professor of Health Promotion, B.S., M.S. University of Wisconsin-La Crosse; Ph.D., Southern Illinois University.

Stetzenbach, Linda (2005) Professor of Environmental Health; B.S., M.S., Ph.D., University of Arizona.

Thompson-Robinson, Melva (2004) Assistant Professor of Health Promotion, B.S. University of Michigan; M.S. Ohio University ; D.P.H. University of South Carolina.

UNLV School of Public Health Affiliated Centers, Institutes and Programs

American Indian Research and Education Center
Nevada Institute for Children's Research and Policy
Center for Health Promotion
Center of Excellence for Women's Health Issues
Institute for Security Studies
e-Records and Healthcare Informatics
e-Medical Technology and e-Health Programs
Center for Health Disparities Research

Master of Public Health (MPH)

The Master of Public Health Degree Program is designed to prepare students to be public health professionals in the private and public sectors with the overall goal of promoting and protecting the health of individuals in our society. The Master of Public Health degree (MPH) is comprised of an 18-credit required core for every student. The 18 credits represent the four primary areas of specialty offered in Public Health programs, plus one additional course entitled Fundamentals of Public Health. The four specialty areas include: (1) Health Promotion, (2) Environmental and Occupational Health, (3) Health Care Administration, and (4) Biostatistics and Epidemiology. In addition to the core courses, each student will select an 18-credit concentration area from one of the four aforementioned concentrations. All candidates will finish their MPH degree with a three-credit capstone project resulting in a 39-credit Master of Public Health degree.

Educational Objectives

The purpose of the MPH Program is to prepare individuals to become effective health care practitioners, researchers and teachers who will competently identify public health problems and needs, develop effective strategies to address those needs, and promote appropriate services to be available for the protection of human health.

At a minimum, the following criteria should be met to assure each student a) develops an understanding of the areas of knowledge that are basic to public health, b) acquires skills and experience in the application of basic public health concepts and of specialty knowledge to the solution of community health problems, and c) demonstrates integration of knowledge through a capstone experience.

MPH Core Courses (18 credits)

HED 710	Fundamentals of Public Health	3 cr
EOH 740	Fundamentals of Environmental Health	3 cr
HED 725	Epidemiology and Public Health	3 cr
HCA 701	Survey of US Health Care Systems	3 cr
HED 705	Theoretical Foundations in Health Promotion	3 cr
EAB 703	Biostatistical Methods for the Health Sciences	3 cr

Concentration in Health Promotion (18 credits)

Students are required to take the following courses (15 credits):

HED 700	Current Issues in Health Promotion	3 cr
HED 715	Health Program Evaluation	3 cr
HED 720	Program Planning and Grant Writing	3 cr
HED 735	Practical Applications in Health Promotion	3 cr
EPY 702	Research Methods	3 cr

Students can select one course from the following list of courses (3 credits):

HED 607	Stress Management	3 cr
HED 627	Methods in Health Education	3 cr
HED 629	Education for Sexuality	3 cr
HED 630	Nutrition	3 cr
HED 635	Health Studies of Dangerous Drugs	3 cr
HED 760	Technological Tools for Health Promotion	3 cr

OR

An advisor approved course from the pool of university-approved graduate level courses. 3 cr

And must also complete a Capstone Project (3 credits):

HED 750	Graduate Project in Health Promotion	3 cr
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Concentration in Environmental and Occupational Health (18 credits):

Students are required to take the following courses (9 credits):

EOH 601	Environmental Toxicology	3 cr
ENV 703	Environmental Law and Policy Seminar	3 cr
ENV 711	Risk Assessment and Risk Management	3 cr

And complete three additional courses (9 credits) from the following:

HPS 680	Industrial Hygiene I	3 cr
HPS 781	Industrial Hygiene II	3 cr
ENV 712	Environmental Risk Decision Making	3 cr
BIO 670	Topics in Applied Microbiology	3 cr
KIN 752	Selected Application of Statistical Techniques II	3 cr
STA 769	Environmental Statistics II: Multivariate Methods	3 cr

OR

Other advisor approved courses from the pool of university-approved graduate level courses. TBA 3-9 cr

And must also complete a Capstone Project (3 credits):

TBA	Graduate Project in Environmental/ Occupational Health	3 cr
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Concentration in Health Care Administration (18 credits):

Students are required to take the following courses (15 credits):

HCA 703	Management of Health Care Organizations and Systems	3 cr
HCA 705	Health Care Finance and Accounting I	3 cr
HCA 706	Health Services Planning and Marketing	3 cr
HCA 707	Quantitative Methods In Health Services Management	3 cr
HCA 708	Information Systems in Health Services Management	3 cr

And complete one additional course (3 credits) from the following:

HCA 704	Health Care Economics	3 cr
HCA 711	Health Care Finance II	3 cr
HCA 652	Health Politics and Policy	3 cr
HCA 761	Health Care Law for Administrators	3 cr
HCA 680	Organization and Management of Long-Term Care Services	3 cr

OR

Other advisor approved courses from the pool of university-approved graduate level courses. XXX 3 cr

And must also complete a Capstone Project (3 credits):

HCA 709	Graduate Project in Health Care Administration	cr
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Concentration in Biostatistics or Epidemiology (18 credits):

Epidemiology: Students are required to take the following courses (15 credits):

TBA	Epidemiology II	3 cr
TBA	Epidemiology Field Experience/Methods	3 cr
TBA	Epidemiology of Chronic Diseases	3 cr
TBA	Epidemiology of Infectious Disease	3 cr
EPY 702	Research Methods	3 cr

Students can select from one of the following (3 credits):

TBA	Public Health Surveillance	3 cr
TBA	Seminar in Epidemiology	3 cr
TBA	Grant Writing in Epidemiology	3 cr

And must also complete a Capstone Project (3 credits):

TBA	Graduate Project in Epidemiology	3 cr
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Biostatistics: Students are required to take the following courses (15 credits):

EAB 763	Biostatistics II – Linear Statistical Models	3 cr
EAB 753	Non-parametric Statistics	3 cr
EAB 773	Survival Analysis	3 cr
TBA	Grant Writing in Biostatistics	3 cr
EPY 702	Research Methods	3 cr

Students can select from one of the following (3 credits):

TBA	Public Health Surveillance	3 cr
TBA	Seminar in Biostatistics	3 cr
TBA	Statistical Probability	3 cr

And must also complete a Capstone Project (3 credits):

TBA	Graduate Project in Biostatistics	3 cr
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Admissions Requirements

To be considered for admission to the MPH, an applicant must:

1. Hold a bachelor's degree or recognized equivalent from a regionally accredited institution and have adequate preparation in the biological, physical, or social sciences. A criterion for admission is at least a B (3.0) grade-point average or the equivalent in work completed after the first two years of a bachelor's degree program and in all post-baccalaureate course work. An applicant who does not meet this academic criterion may request special consideration.
2. Completion of the school's application

3. Submit a personal essay describing what you perceive to be pressing public health issues, why a career in the field appeals to you, and how it will use your strengths and commitment
4. Three letters of recommendation
5. Satisfactory results from one of the following taken within the past five years (the GRE or GMAT is preferred):
 - a. Graduate Record Examination (GRE)
 - b. Graduate Management Admission Test (GMAT)
 - c. Medical College Admission Test (MCAT)
 - d. Law School Admission Test (LSAT)In addition, a satisfactory score on the Test of English as a Foreign Language (TOEFL) is required for applicants whose first language is not English
6. Official copies of all transcripts sent to the Graduate College and the School of Public Health

Graduation requirements

All students are required to complete six core courses including (18 credits): Biostatistics, Epidemiology, Fundamentals of Environmental and Occupational Health, Theoretical Principles of Health Promotion, Survey of U.S. Health Care Systems, and Fundamentals of Public Health. Additionally, all students are required to complete a Capstone Project. The Capstone Project requirement may be fulfilled by a professional paper, approved seminar series, thesis, or comprehensive examination.

Students will also be required to take six courses (18 credits) in a concentration area and complete a capstone experience (3 credits). The total program of study is 39 credits. By special permission, a candidate may be authorized to present a thesis instead of 6 of the 39 units required. A student must have at least a B (3.0) grade point average in all graduate work in order to graduate.

A student may also choose to complete a comprehensive final examination given by the faculty of the student's area, instead of a final project. The MPH degree will be awarded only when all these requirements are met.

Epidemiology and Biostatistics

EAB 703 3 credits
Biostatistical Methods for the Health Sciences

Designed to provide a foundation in biostatistics for graduate students in the health sciences. Topics include probability, distributions, estimation, hypothesis testing, ANOVA, simple and multiple regression, vital statistics, and nonparametric methods.

EAB 753 3 credits
Nonparametric Statistics for Public Health

Designed to provide a strong foundation in nonparametric statistical methods commonly used in public health. Topics explored in the course include ranked data, transformation of ranks, methods for paired and independent samples, nonparametric regression and correlation, categorical data analysis, and robust estimation. Prerequisite: Graduate level biostatistics.

EAB 763 **3 credits**

Linear Statistical Models

Explores the foundations and applications of linear statistical models. Applications include simple, multivariate, and logistic regression; time series analysis; single-/multiple-factor ANOVA; random and mixed effects models; and ANCOVA. Several experimental designs will also be explored. Prerequisite: Graduate level biostatistics.

EAB 773 **3 credits**

Survival Analysis for Public Health

Explores the broad area of survival analysis for analyzing data derived from laboratory, clinical, and epidemiological studies. Methods explored in this course include survival functions, data censoring, hazard models, regression models, and parametric/nonparametric methods for comparing survival models. Prerequisites: EAB 753 and EAB 763.

Environmental and Occupational Health

EOH 740 **3 credits**

Fundamentals of Environmental Health

This course will address chemical, physical and biological factors in the environment and their relationship to the health of the human population.

EOH 769 **3 credits**

Advanced Pollution Ecology

This course will address the major effects of pollution on aquatic organisms and ecosystems. Prerequisites: EOH 740 or permission of instructor.

Health Care Administration

HCA 701 **3 credits**

Survey of US Health Care System

Survey of U.S. health care systems' organization and financial structure, including historical, demographic, political, cultural, socioeconomic, and environmental analysis of the current system. Includes analysis of current policy, ethical issues, and trends as well as a comparison of the U.S. system with other industrialized systems. Prerequisites: Graduate standing.

HCA 702 **3 credits**

Epidemiology in Health Services Management

Examination and synthesis of concepts and an application of methods appropriate to epidemiology from a managerial perspective. Scope, potentialities and limitations of traditional epidemiology principles and evaluation of epidemiology information and approaches in health administration practice.

HCA 703 **3 credits**

Management of Health Service Organizations and Systems

Theories and practice of the management of health services. Analysis and evaluation of the management functions and roles, organizational theories and behavioral perspectives and health care policy issues as they apply to health services management.

HCA 704 **3 credits**

Health Care Economics

Application of economic theory to study of health markets and institutions. Impact of insurance on demand for and supply of health care analyzed. Competition and regulation as forces in health care industry discussed from an economic perspective.

HCA 705 **3 credits**

Health Care Accounting and Finance

Introduction to financial and managerial accounting in the context of the health care industry. Also introduces concepts from finance for use in the decision making process. Prerequisite: Facility with spreadsheet software highly recommended.

HCA 706 **3 credits**

Health Services Planning and Marketing

Theories and applications of health planning and marketing examined. Basic concepts of strategic and operational planning for health care organizations. Focus and alternative approaches to planning and marketing, environmental assessment, organizational dynamics, and team development.

HCA 707 **3 credits**

Quantitative Methods in Health Services Management

Application of quantitative methods in health service environment to evaluate services, assist managers, understand research, and problem solve. Emphasis on applications of quantitative techniques in health service environment to evaluate services, assist managers, understand research, and problem solve. Access to a personal computer necessary. Prerequisite: HCA 701 or consent of instructor.

HCA 708 **3 credits**

Information Systems in Health Services Management

Understanding of computerized needs of health services managers. Examines decision making process, information needs of various decisions and how "decision support systems" meet these needs. Major types of information systems examined, include financial, patient care & strategic management systems. Prerequisites: HCA 701 or consent of instructor.

HCA 709 **3 credits**
Integrative Project in Health Care Administration

Integrates knowledge and skills gained in curriculum as well as examines attitudes and values of health care administrators. Emphasis on applications through group projects in work environment collaboration of students, health care executives and faculty. Prerequisites: Last semester in program or consent of instructor.

HCA 711 **3 credits**
Advanced Health Care Finance

Further study of financial management in the context of the health care industry. Prerequisites: HCA 705 or the equivalent.

HCA 761 **3 credits**
Health Care Law for Administrators

Introduction to health care law for (non-lawyer) administrators. Basic legal principles and issues regarding topics such as the structure of health care organizations, professional relationships, government regulation, individual and institutional tort liability, and other patient care issues.

The following courses have been approved for graduate credit. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

EOH 601 Advanced Environmental Toxicology

Health Promotion

Chair

Henry, L. Jean (1998), Assistant Professor; B.S., Texas A&M University; M.A., Michigan State University; Ph.D., Texas Women's University.

Graduate Coordinator

Papenfuss, Richard (1999), Associate Professor; B.S., M.S., Winona State University Ph.D., University of Utah.

Graduate Faculty

Bungum, Timothy J. (2001), Associate Professor; B.A., Luther College; M.S., Dr.P.H., University of South Carolina.

Ferguson, Paul W. (1999), Professor, Senior Vice Provost and Dean of the Graduate College; B.A., Whittier College; Ph.D., University of California, Davis.

Regin, Charles (1987), Assistant Professor; B.S., M.S., University of Wisconsin-La Crosse; Ph.D., Southern Illinois University at Carbondale.

McNab, Warren (1979), Professor; B.S., M.S., Mankato State University; Ph.D., Southern Illinois University.

Thompson-Robinson, Melva (2004), Assistant Professor; B.S., University of Michigan; M.S.P.E., Ohio University; D. PH., University of South Carolina.

Master of Education in Health Promotion

The goal of the 36-semester hour Health Promotion graduate program is to provide students with the theory, knowledge, and skills needed to integrate the principles of health promotion into a variety of community, research, clinical, business or school settings and/or to pursue advanced study. Specifically, the Health Promotion degree program will prepare students to: 1) assess and communicate individual, family, and community needs, 2) plan, implement, evaluate, and administer programs, 3) act as a resource person by coordinating provisions for services and applying appropriate research principles and methods, and 4) advance the goals of job-related professional organizations. To this end, eight concentrations in the Health Promotion degree are offered.

The *Administration* concentration is designed for those interested in assuming leadership roles in their organization such as health program planners, health care project specialists, or health officers, to name a few.

The *Communication* concentration is designed for individuals interested in the transmission of health promoting information and skills through sophisticated and varied interaction strategies leading to health media specialists or health communication experts occupations.

The *Counseling* concentration is designed for anyone wishing to assist others one on one or in small groups regarding effective and positive strategies dealing with critical health issues. Such professionals include, but are not limited to, employee assistance program educators, patient educators, or mental health counselors.

The *Education* concentration is designed to improve the delivery skills of any educator at any teaching level at varied sites such as school health teachers, public health educators, and employee wellness associates.

The *Environmental Health* concentration is designed for those individuals seeking occupations such as health and safety specialists or environmental health consultants due to an interest in the relationship that exists between the physical environment and the health interactions of individuals and groups in that environment.

The *Gerontology* concentration is designed for individuals who are interested in health promotion strategies geared specifically for older adults delivered through professional roles such as gerontology outreach workers or program planners for seniors.

The *Nutrition and Fitness* concentration is designed for those interested in the fields of corporate health promotion or personal wellness training who desire to advise individuals and groups regarding eating choices and activity regimens to enhance performance.

The *Interdisciplinary* concentration, clearly the most flexible, is designed for those students with specific needs who would be best served by selecting a myriad of graduate courses from across campus. Individuals such as school nurses, epidemiologists, and industrial hygienists could benefit from the individualized approach offered in this concentration.

Admission Requirements

In addition to meeting the admission requirement of the Graduate College as outlined in the front of this catalog, applicants must also meet the requirements established by Health Promotion faculty in the Department of HPE.

1. Interested applicants to the Master of Education degree in Health Promotion should have an undergraduate major in any health or allied health academic discipline. If admission is sought by students who have not earned a major described above, up to nine semester hours of HED 600-level course work may be required as part of the degree requirements.
2. Applicants must have a minimum overall undergraduate grade point average (GPA) of 3.00 on a 4.00 scale during their last two years of undergraduate work.
3. An application for admission must be obtained from the Graduate College. Official transcripts of all colleges and universities attended should be submitted to the Graduate College and Department.
4. Two letters of recommendation, a two-page statement of professional goals, and official transcripts of all colleges and universities attended should be submitted directly to the Department of Health Promotion.

Applications are processed when all credentials required by both the Graduate College and the Department of Health Promotion have been received and evaluated. The Graduate College will officially notify students of their acceptance. Additionally, the Department of Health Promotion staff will notify students of their advisor, to work with the student to

develop the individual plan of study. Application deadlines include: March 15 for summer enrollment, July 1 for fall enrollment, and November 15 for spring enrollment.

For details of the Master of Public Health program, please see the School of Public Health information. The Department of Health Promotion offers and Master of Education and a Master of Public health in Health Promotion.

Degree Requirements for the M.Ed. in Health Promotion

The Master in Education in Health Promotion requires a minimum of 36 semester hours.

1. A student must maintain a 3.00 GPA.
2. A student may take courses full or part time, with day and evening classes available.
3. Students must either take a comprehensive exam and successfully complete an additional three credits of advisor approved course work or successfully complete HED 750 Graduate Project in Health Promotion to fulfill the requirement of a capstone experience in the degree program.
4. Master's degrees must be completed within a six-year period, and continuous enrollment must be maintained throughout the six years.

Curriculum

The curriculum for the M.Ed. in Health Promotion consists of the following:

Health Promotion Core Requirements (12 semester hours)

HED 705	Theoretical Foundations of Health Promotion (3)
HED 715	Health Promotion Evaluation (3)
HED 720	Program Planning / Grant Writing in Health Promotion (3)
HED 735	Practical Applications in Health Promotion (3)

Health Promotion Research Core Requirements (9 semester hours)

HED 725	Epidemiology and Public Health (3)
EPY 702	Research Methods (3)
EPY 718	Introduction to Qualitative Research Methods (3) or
EPY 721	Introduction to Statistics (3)

Health Promotion Capstone Experience (3 semester hours)

HED 750	Graduate Project in Health Promotion (3) or Comprehensive Exam and advisor approved course(s) (3)
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Selected Concentration (12 semester hours)

Administration Concentration – Courses for the Administration Concentration may be selected from, but are not limited to, the following list:

- HCA 701 Survey of United States Health Care System
- PUA 701 Principles of Public Administration
- PUA 713 Seminar in Organization Theory
- PUA 714 Seminar in Fiscal Administration
- PUA 715 Administrative Law
- PUA 718 Seminar in Public Personnel Administration
- PUA 719 Personnel Assessment and Selection
- PUA 740 Urban Administration
- PUA 742 State Government Administration
- PUA 792 Current Issues in Public Administration

Communication Concentration – See the department for curricular information.

Counseling Concentration – See the department for curricular information.

Education Concentration – Courses for the Education Concentration may be selected from, but are not limited to, the following list:

- ECE 709 Investigations in Early Childhood Education
- ESP 701 Introduction to Special Education
- EDW 745 History and Philosophy of Adult and Postsecondary Education
- EDW 747 Workforce Education Teaching
- CIG 700 Curriculum and Instruction
- CIG 750 Multicultural Education
- CIG 752 Theory and Research in Multicultural Education
- CIG 767 Human Relations for the Teacher Educator
- CIT 702 Computers in the Secondary Curriculum
- CIT 720 Integrating Computer-Based Technology in Teaching and Learning
- CIT 747 Telecommunications in Education
- CIS 706 Public Education in the Urban Setting

Environmental Health Concentration – Courses for the Environmental Health Concentration may be selected from, but are not limited to, the following list:

- ENV 702 Environmental Problem Solving
- ENV 703 Environmental Law and Policy Seminar
- ENV 711 Risk Assessment and Risk Management
- HPS 680 Industrial Hygiene
- HPS 781 Industrial Hygiene II
- ENV 793 Independent Study in Environmental Science
- ENV 794 Special Topics in Environmental Science
- EOH 601 Environmental Toxicology and Risk Assessment
- EOH 740 Environmental Health

Gerontology Concentration – Courses for the Gerontology Concentration may be selected from, but are not limited to, the following list:

- SOC 679 Sociology of Aging
- ANT 637 Anthropology of Aging
- COU 710 Counseling the Older Adult
- COU 715 Personal and Group Processes

- COU 756 Medical Aspect of Disability
- THTR 793 Special Topics in Theatre
- SOC 680 Sociology of Death and Dying
- SOC 682 Aging and Social Policy

Nutrition and Fitness Concentration – Courses for the Nutrition and Fitness Concentration may be selected from, but are not limited to, the following list:

- KIN 605 Sports Nutrition
- KIN 685 Physical Activity and the Law
- KIN 691 Exercise Physiology
- KIN 737 Biomechanics of Strength
- KIN 739 Evaluation of Physical Working Capacity
- KIN 740 Advanced Exercise Physiology
- KIN 745 Human Energy Metabolism

Interdisciplinary Concentration – In addition to the courses listed above, students may select, with guidance and approval from their advisor, any graduate-level course that meets individual and professional needs identified by students.

The core courses in health promotion also provide substantive contributions to other graduate programs offered across campus. These programs include, but are not limited to, those programs offered by the College of Business and the departments of Communication Studies, Counseling, Curriculum and Instruction, Economics, Educational Leadership, Kinesiology, Political Science, Psychology, Public Administration, Sociology, Special Education and the Schools of Journalism and Media Studies and Social Work.

The design of the concentration component must revolve around a consistent theme and be relevant to the goals and objectives of the program and of the student. Design is to ensure a breadth and depth in a supportive area of concentration such as curriculum and instruction, special education, health promotion, school athletic administration, educational leadership, education administration, sport and recreational management, and psychology of sport.

Health Education

HED 705 **3 credits**

Theoretical Foundations in Health Promotion

Study of the social, cultural, demographic, political, and educational foundations of health promotion. Professional and practice settings in health promotion reviewed. Traditional and contemporary concepts of treatment, intervention, and prevention as applied to health promotion investigated.

HED 710 **3 credits**

Fundamentals of Public Health

Introduces students to public health concepts and practice. Provides broad overview of the field of public health and focused look at core areas of health promotion and education, environmental health, epidemiology and biostatistics, and health care administration in the public health arena.

HED 715 **Health Program Evaluation** **3 credits**

Provides overview of processes and skills required to effectively evaluate health programs. Formative, summative, process, and outcome evaluation methods discussed for application in a variety of professional settings. Includes socio-cultural, political, administrative, and ethical issues in conducting evaluation.

HED 720 **Program Planning and Grant Writing in Health Promotion** **3 credits**

Principles of program planning based on assessing individual and community needs and techniques to evaluate the effectiveness of health promotion programs. Also designed to analyze the process to obtain fiscal resources through grants, contracts, and other internal and external sources. HED 780 or advisor approval; HED 705 (or concurrent HED 705 /HED 720 enrollment).

HED 725 **Epidemiology and Public Health** **3 credits**

Explores principles related to the distribution and causality of disease. Focuses on etiology, prevention and control of communicable and chronic human disease. Participants trained in basic epidemiological methodology, featuring case-series, case-control, experimental and cohort study designs.

HED 735 **Practical Applications in Health Promotion** **3 credits**

Identification and development of methods and strategies within the health education system which influence decisions about personal, family, organizational, and community health promotion. Emphasis on developing competency in planning and implementation of classrooms and clinical teaching strategies and health information dissemination. Prerequisites: HED 705 and 720.

HED 750 **Graduate Project in Health Promotion** **3 credits**

Capstone experience provides health promotion graduate degree candidate with opportunity to be involved with in-depth project either written, experiential, or combination in nature. Planned and carried out under graduate faculty approval and supervision.

HED 760 **Technology in Health Promotion** **3 credits**

Use of current technology as it relates to health issues. Provides knowledge and skills to the health professional to enhance utilization of technology applications.

HED 780 **Seminar in Health Promotion** **3 credits**

Selected studies in health promotion, health education or health-related area addressed through readings, discussions, and/or presentations. Specific topic(s) announced in the schedule of classes. May be taken up to a maximum of six credits. Prerequisites: Graduate standing, consent of instructor and/or degree program advisor.

HED 785 **Independent Study in Health Promotion** **1-3 credits**

Individually arranged study of areas of health promotion not covered in depth in other courses. May be repeated up to a maximum of six credits. Prerequisites: Consent of instructor and graduate program advisor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

HED 629 Education for Sexuality

William F. Harrah College of Hotel Administration

Graduate education in the William F. Harrah College of Hotel Administration is a personalized experience. There's no better place to learn about the hospitality and leisure services profession than the entertainment capital of the world. Las Vegas is a living laboratory of more than 130,000 hotel rooms, hundreds of restaurants, resorts, sporting events, conventions, trade shows, and leisure and recreation facilities, programs and services. The city provides a perfect complement to your education. If you are interested in a Master's degree in Hotel Administration or Sports and Leisure Service Management, or an Executive Master's or Ph.D. in Hospitality Administration to advance your career or prepare you to teach others about the hospitality industry, this is the place for you. Our internationally recognized diverse faculty are willing to work with you to create an academic program that meets your unique needs.

Stuart Mann, Dean

Dean

Mann, Stuart H. (1998), Professor and Dean, College of Hotel Administration; B.S., University of Illinois; M.S., Ph.D., Case Western Reserve University.

Director of Graduate Studies

Brewer, Kathleen Pearl (1993), Professor; B.S., M.S., Ph.D., Purdue University.

Graduate Coordinators

Busser, James A. (1987), Associate Professor; B.S., Illinois State University; M.S., Ph.D., University of Illinois at Champaign-Urbana.
Love, Curtis C. (1998), Associate Professor; B.S., University of Southern Mississippi; M.A., Ph.D., University of Alabama.
Nelson, Kathy Beard (1996), Assistant Professor; B.S., M.S., Ph.D., University of Nevada, Las Vegas.

Graduate Faculty

Bai, Bill (2001), Assistant Professor; B.A., Nankai University; M.Phil., Hong Kong Polytechnic University; M.S., Ph.D., Purdue University.
Baloglu, Seyhmus (1996), Assistant Professor; B.S., Cukurova University; M.B.A., Hawaii Pacific University; Ph.D., Virginia Polytechnic Institute and State University.
Barrash, Deborah (2002), Assistant Professor; B.S., University of Pennsylvania; M.P.S., Ph.D., Cornell University.
Bell, Donald A. (1981), Professor; B.A., M.B.A., Ph.D., Michigan State University.
Bernhard, Bo Jason (2002), B.A. Harvard University; M.A., University of Nevada, Las Vegas; Ph.D., University of Nevada, Las Vegas.

Carruthers, Cynthia P. (1990), Associate Professor; B.S., M.S., Ph.D., University of Illinois at Champaign-Urbana.
Christianson, David J. (1977), Professor; B.A., M.R.E., Brigham Young University; Ph.D., Texas A&M University.
Corsun, David (1999), Assistant Professor; B.S., Ph.D., Cornell University; M.A., New York University.
Costen, Wanda (2001), Assistant Professor; B.S., U.S. Military Academy; EMBA, Pepperdine University; Ph.D., University of Washington.
Dalbor, Michael C. (2000), Assistant Professor; B.S., Ph.D., Pennsylvania State University; M.B.A., Loyola College.
Farrar, Angela (1999), Associate Professor; B.S., Ph.D., Virginia Polytechnic Institute and State University.
Feinstein, Andrew (1999), Assistant Professor; B.S., M.S., University of Nevada, Las Vegas; Ph.D., Pennsylvania State University.
Fried, Bernard (1989), Associate Professor; A.A., Tacoma Community College; B.A., Evergreen State College; B.A., University of Nevada, Las Vegas; M.B.A., Dallas Baptist University; Ed.D., University of LaVerne.
Hardigree, Christian (2001), Assistant Professor; B.S., University of Nevada, Las Vegas; J.D., Mercer University School of Law.
Holmes, David (1976), Professor; B.S., M.S., Indiana State University; Ph.D., University of Utah.
Jones, Thomas (1990), Associate Professor; B.F.A., University of South Dakota; B.S., M.S., University of Nevada, Las Vegas; Ed.D., Arizona State University.
Kincaid, Clark S. (2004), Assistant Professor; B.A.m Southern Utah State Collge, M.S., Ph.D., University of Nevada, Las Vegas.
Lucas, Anthony (2001), Assistant Professor; B.S., Ball State University; M.B.A., Ph.D., University of Nevada, Las Vegas.
Mayer, Karl (2001), Assistant Professor; B.S., University of Wisconsin-Madison; M.S., Columbia University; M.B.A. Harvard University; Ph.D., University of Nevada, Las Vegas.
McCool, Audrey (1990), Professor; B.S., M.A., University of Illinois, Urbana; Ed.D., Texas Tech University.
Montgomery, Rhonda (1995), Associate Professor; B.S., M.S., Purdue University; Ph.D., University of South Carolina.
Ramdeen, Collin (2002), B.S., Brigham young University; M.S., University of Miami; Ph.D., University of Nevada, Las Vegas.
Sammons, Gail (1996), Associate Professor; B.S., North Dakota State University; M.S., University of Nevada, Las Vegas; Ph.D., Pennsylvania State University.
Stefanelli, John (1987), Professor; B.S., University of Illinois; M.B.A., Michigan State University; Ph.D., University of Denver.
Swerdlow, Skip (1981), Professor; B.S., M.B.A., D.B.A., Arizona State University.
Tyrrell, Brian (2001), Assistant Professor; B.S., M.A., Westchester University; Ph.D., Purdue University.
Werner, Bill (2001), Assistant Professor; B.A., Ohio State University; J.D., University of Cincinnati.
Woods, Robert (2000), Professor; B.S., University of Oklahoma; M.S., Ph.D., Cornell University.
Young, Cheri (1999), Assistant Professor; B.S., State University of New York at Albany; M.S., Rochester Institute of Technology; Ph.D., Cornell University.

Professors Emeriti

Abbey, James R. (1973-2000) Emeritus Professor; B.A., M.B.A., Michigan State University; Ph.D., Utah State University.
Basile, Richard E. (1970-1988), Emeritus Professor; B.A., Washington and Lee University; L.H.D., Combs College.
Borsenik, Frank D. (1975-1994), Emeritus Professor; B.S., M.S., Ph.D., Michigan State University.

Goll, Gerald (1986-2000), Emeritus Associate Professor; B.A., Michigan State University; M.A., Pepperdine University; D.B.A., United States International University.

Goodwin, John R. (1980-1993), Emeritus Professor; B.S., J.D., West Virginia University.

Metcalf, Lyell E. (1970-1994), Emeritus Associate Professor; B.S., B.A., M.A., University of Arizona; C.P.A., California.

Vallen, Jerome J. (1967-1998), Emeritus Dean of the College of Hotel and Professor; B.S., Ph.D., Cornell University; M.Ed., St. Lawrence University.

The William F. Harrah College of Hotel Administration, known for its tradition of offering world-class programs in hospitality administration, offers graduate programs leading to the Master of Science degree in Hotel Administration and the Doctor of Philosophy degree in Hospitality Administration. The Ace Denken Co. Ltd. Endowment supports the Ph.D. in Hospitality Administration.

Master of Science Degree

The Master of Science degree program is designed to meet the needs of managers in the hospitality industry and instructors/researchers in hospitality education programs. The need continues in the hospitality industry for persons with a wide variety of professional and academic skills at both corporate and operations levels. Through its master's program, the Harrah Hotel College seeks to prepare students to meet this need.

Graduate students can pursue a program emphasis in food service administration, hotel administration, hospitality education, convention and meeting planning, event management, or casino operations. Students will have the opportunity to conduct research on a subject that interests them by writing a thesis. This decision will be based upon the student's goals and consultation with a graduate committee.

Admission Requirements

The student must satisfy the minimum admission requirements of the Graduate College and the Harrah Hotel College, including:

1. Submission of completed application form.
2. Submission of official transcripts from all institutions attended after high school.
3. A baccalaureate degree from an accredited four-year college or university with at least a 2.75 overall undergraduate grade point average or at least 3.00 in the last two years of undergraduate work.
4. A satisfactory composite score on the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT). Only official scores will be accepted.
5. One year of full-time experience in a management or administrative capacity in the hospitality industry or a minimum of one year of full-time teaching experience in a hospitality management program.
6. A brief essay of approximately 500 words dealing with the applicant's career goals and reasons for pursuing a graduate degree.

7. Two letters of recommendation, one from a former employer and the other from a college faculty member able to evaluate the applicant's potential for success in a graduate degree program.
8. A current resumé with employer references.

In addition, international applicants must also submit a satisfactory TOEFL score (minimum 550 written or 213 computerized) and financial certification. International students should check with the Graduate College for deadlines and procedures.

Degree Requirements

In addition to the general requirements established by the Graduate College, the candidate must meet the following Harrah Hotel College requirements:

1. Successfully complete a minimum of 36 credit hours, of which no less than 24 are in Hotel Administration. This allows for a variety of supplemental tracks including business, education, and foreign language. At least 27 credits must be at the 700-level.
2. Successfully complete prerequisite courses if the student's undergraduate preparation is unsatisfactory in business and/or hotel administration. Generally, no more than six credits of preparatory courses will be required, and an effort will be made to limit the total requirement for the M.S. to 42 credits.
3. Required courses:

HOA 701	Operations Analysis in Hospitality Management
HOA 703	Human Resources and Behavior in the Hospitality Industry
HOA 705	Financial Analysis for the Service Industries
HOA 711	Laws of Innkeeping and Food Service
HOA 716	Principles and Practices in Hotel Management
	or
HOA 717	Principles and Practices in Convention and Meetings Management
	or
HOA 718	Principles of Casino and Gaming Management
	or
HOA 720	Principles and Practices of Food Service Management
HOA 735	Research Methodology
HOA 740	Marketing Systems
HOA 760/761/762/763	Research Seminar in Hotel Administration, Food Service Management, Education, or Casino or Gaming or Critical Issues in Hospitality Management*
HOA 730	Statistical Analysis for Hospitality and Leisure Studies

Supporting Courses

Graduate-level courses approved by the student's chair or graduate advisor - 3-9 credits*

HOA 791 Professional Paper
or
HOA 799 Thesis

A student may opt to write a thesis (six credits) or a professional paper (three credits and a three credit supporting course). The thesis option is designed for students with a research orientation. An oral examination is required of all candidates for the M.S. degree.

*Supporting Course Requirements: 3-9 credits. Students may substitute a supporting course for HOA 760,761,762, 763, or 777 if they are taking a concentration of courses in one area such as human resource management, accounting, or marketing and they have the approval of their chair or graduate advisor. Supporting courses should meet the student's degree objectives. These courses may come from graduate courses in any department but must be approved by the student's chair.

Master of Hospitality Administration - Executive Program

This 30-credit program is designed to bring hospitality executives together to learn the latest management and leadership techniques in an executive format, via the Internet or other media. Demand determines the schedule for the program.

In addition to regular tuition and fees, this program has an additional special fee of \$510 per credit to cover the cost of delivery in an executive format. Books and software are included in the fees. For more information on the Master of Hospitality Management - Executive Program, contact the Director of Graduate Studies and Research in the Harrah Hotel College, (702) 895-3643.

Admission requirements for the M.H.A. program

The applicant must meet the following requirements:

1. Submission of completed M.H.A. application form and required admission fee.
2. Submission of official transcripts from all institutions attended after high school to both the hotel graduate office and the Graduate College.
3. A baccalaureate degree from an accredited four-year college or university with an overall undergraduate grade point average of at least 3.00 in the last two years of undergraduate work.
4. Three years of full-time experience in a management or administrative capacity in the hospitality industry.
5. Two letters of recommendation, one from the applicant's current employer and the other from a college faculty member able to evaluate the applicant's potential for success in a graduate degree program. If the applicant has not been in a college program in the last six years, a letter from a former employer may be substituted for the second letter.

6. A current resumé.

In addition, international applicants must also submit a satisfactory TOEFL score (minimum 600) and financial certification.

Degree requirements for the M.H.A. Program

Successfully complete (with a grade of B or better) 30 credit hours of 700-level course work in the Harrah Hotel College. These credits will come from seven core courses and three supporting courses, as determined by the faculty.

A sample degree plan is as follows:

First year

MHA 703 Human Resources and Behavior in the Hospitality Industry
MHA 705 Financial Analysis for the Service Industries
MHA 740 Marketing Systems

Supporting Course

One of the 700-level MHA Graduate Courses

MHA 781 Independent Study - This would be an action research project designed to investigate a situation in the student's workplace.

Second year

MHA 735 Research Methodology

Supporting Course

One of the 700-level MHA Graduate Courses

Supporting Course

One of the 700-level MHA Graduate Courses

MHA 751 Hospitality Service Management
MHA 791 Professional Paper

Total 30 credits

Doctor of Philosophy Program

The Ph.D. program is a multi-conceptual and research-based degree program designed to produce top quality hospitality educators and researchers. The Ph.D. program is designed for persons interested in teaching hospitality management at the university level. The Ace Denken Co. Ltd. Endowment supports the degree program.

Admission Requirements

The student must satisfy the minimum admission requirements of the Graduate College and the Harrah Hotel College including:

1. Submission of a completed application.
2. Submission of official transcripts from all institutions attended after high school.
3. Master's degree from an accredited institution with at least 24 credits in hotel administration or business administration, food service administration, tourism/convention administration, or a closely aligned field.
4. An overall GPA of 3.00 on a 4.00 scale for all work completed at the post-baccalaureate level.

5. Completion of the Graduate Management Admission Test (GMAT) with a minimum score of 550 (only official scores will be accepted).
6. Three letters of recommendation, two of which must come from faculty members with whom the student has previously studied, evaluating the student's ability to perform at the Ph.D. level of study.
7. A statement of 500 words outlining what the applicant would expect to accomplish during the Ph.D. program and his/her particular research interest(s).
8. An M.S. level thesis or the equivalent.
9. A current resumé.

In addition, international students are required to submit a satisfactory TOEFL score (minimum of 600) and financial certification. International students should check with the Graduate College for deadlines and procedures.

Degree Requirements

1. Required Courses for Ph.D. in Hotel

Administration Core: 9 credits

- | | |
|--|-------|
| HOA 779 Seminar on Issues and Trends in Hospitality Management
(one credit each semester, to be taken the first three semesters of course work) | 3 cr. |
| HOA 778 Readings in Hospitality Management
(Readings course on important works in your major, set up by your chair) | 3 cr. |
| HOA 762 Research Seminar in Hospitality Education | 3 cr. |
| HOA 737 Philosophy of Science | 3 cr. |

Quantitative Methodology and Qualitative Methodology 9 cr.

- | | |
|--|-------|
| HOA 735 Research Methods | 3 cr. |
| HOA 736 Advanced Research Methodology | 3 cr. |
| EPY 718 Qualitative Research Methodologies | 3 cr. |

Statistical Analysis, two courses from the following 6 cr.

- EPY 722 Inferential Statistics and Experimental Design
(Prerequisite HOA 730 or ECO 705 & ECO 771)*
or ECO 771 Advanced Statistical Modeling
(Prerequisite HOA 730)*
STA 715 Multivariate Statistical Methods
STA 713 Experimental Design

*Students who have not taken a graduate statistics class recently are advised to take HOA 730.

Major and Minor Area of Study 15 credits

These courses are set up in consultation with your chair. The courses must be approved by your chair and the director of the graduate program (minimum of nine credits plus HOA 778) in the major area and a minimum of six credits in the minor area.

Electives 9 credits

Can be used to fulfill a prerequisite if the courses are at the 700 level or higher.

Dissertation Credits 12 credits

Total Credits Required 60 credits

1. Must have at least 24 credits in the Hotel College (excluding dissertation credits) and 12 credits outside of the Hotel College. All credits must be from 700 level or higher courses.
2. Successful completion of all courses approved on the student's graduate program of study with a 3.00 or better. Any credits completed with less than a 3.00 will be reviewed by the Director of Graduate Studies and may result in the student's termination from the program.
3. After the first year of course work but before the end of the fourth semester a statistical qualifying exam must be passed.
4. The student must file an approved degree plan before the start of the third semester after admission to the program. The degree plan must be developed in consultation with the student's Doctoral Advising Committee and approved by the student's Doctoral Advising Committee, the Doctoral Program Committee and the Director of Graduate Studies and Research.
4. The student must successfully complete a preliminary examination designed to evaluate his/her ability to progress on to the dissertation. The examination will be given in two parts and must be taken after completion of 80 percent of the approved program credits and within five calendar years of the admission date. The examination will include written and oral segments.
5. Simultaneous to the last semester of content-related course work (non-dissertation credits), the student must pass a major and minor area comprehensive exam. This exam is designed by the student's committee under the direction of the dissertation chair. This exam must be taken within five years of the admission date.
6. The student must successfully write and defend his/her dissertation proposal and the completed dissertation. The dissertation must be of substantial quality and length, original in thought and research, and a significant contribution to the body of knowledge in the field of hospitality administration. Having submitted a dissertation acceptable to the Doctoral Advising Committee, the student will orally defend the dissertation before the committee and other members of the University and Community College System of Nevada graduate faculty. Upon successful completion of the dissertation and agreement by the student's Doctoral Advising Committee, the Doctoral Program Committee and the Director of Graduate Studies and Research, the student shall present a seminar to interested students, faculty, and other persons reflecting upon the important elements and conclusions of the dissertation.

Dual M.B.A. and M.S. in Hotel Administration

The dual M.B.A. and M.S. in Hotel Administration program of study is designed for those who seek career and business leadership opportunities in hotel administration. The program will provide students with the needed skills, knowledge, and tools to become visionary and creative business leaders in hotel administration. The core M.B.A. program is designed to advance the knowledge and practice of business and administration. The M.S. in Hotel Administration portion of the dual degree is designed to provide the industry-specific teaching and learning program. The program takes advantage of the natural learning environment that is created by the Las Vegas economy, the entertainment capital of the world. Students will receive a dual degree, an M.B.A. and a M.S. in Hotel Administration.

Admission:

The admission requirements for the dual degree program are the same as those stated under the regular M.B.A. and M.S. in Hotel Administration programs. In addition, the College of Hotel Administration requires that applicants submit evidence of one year of full-time experience in a management or administrative capacity in the hospitality industry. Applicants must be admitted to both the M.B.A. and Master of Science in Hotel Administration programs.

Application Process:

See the Application Process Section under the regular M.B.A. and M.S. in Hotel Administration programs. After consideration by the M.B.A. program, the applicant's file will be forwarded to the College of Hotel Administration for consideration.

Degrees Requirements:

Students must be admitted to both the M.B.A. and M.S. in Hotel Administration programs with graduate standing. The candidates must successfully complete the 33 credit hours of the M.B.A. required core courses and the 21 credits hours of required Hotel Administration courses. Students must start the M.B.A. core before enrolling in Hotel Administration courses. Required courses are:

A. M.B.A. Core Courses:

MBA 702	Statistical Analysis	3
MBA 706	Law, Regulations, and Ethical Issues	3
MBA 707	Organizational Behavior	3
MBA 709	Accounting for Managers	3
MBA 710	Applied Economic Analysis	3
MBA 711	Managerial Finance	3
MBA 715	Market Opportunity Analysis	3
MBA 720	Supply Chain Management	3
MBA 730	Information Systems Management	3
MBA 735	International Business and Cross-cultural Perspectives	3
MBA 795	Strategy Formulation Processes	3
Total M.B.A. Core		33

B. M.S. In Hotel Administration Courses:

HOA 703	Human Resources and Behavior in the Hospitality Industry	3
HOA 705	Financial Analysis for the Service Industries	3
HOA 716	Principles and Practices in Hotel Management, or	
HOA 718	Principles of Casino and Gaming Management, or	
HOA 720	Principles and Practices of Food Service Management	3
HOA 735	Research Methodology	3
HOA 760	Research Seminar in Hotel Administration, or	
HOA 761	Research Seminar in Food Service Administration, or	
HOA 763	Research Seminar in Casino and Gaming Management	3
HOA 751	Hospitality Service Management	3
HOA 791	Professional Paper	3
Total M.S. in Hotel Administration		21

For a detailed description of the courses see M.B.A. and M.S. in Hotel Administration.

Hotel Administration

HOA 701 **3 credits**
Operational Analysis in Hospitality Management
 Research design, operations analysis, and the application of analytical models for the hotel and food service industry. Prerequisite: HOA 730.

HOA 703 **3 credits**
Human Resources Management in the Hospitality Industry
 Examines the functions of human resource management through readings, cases and applied research with special attention to strategic HR alliances and developing trends.

HOA 705 **3 credits**
Financial Analysis for the Service Industries
 Problems and cases in applying accounting and financial information to executive decision making in the hospitality industry. Prerequisite: Adequate preparation in accounting.

HOA 711 **3 credits**
Laws of Innkeeping and Food Service
 Examines through case studies and discussion the modern application of the laws of innkeeping using a historical perspective.

HOA 716 **3 credits**
Principles and Practices in Hotel Management
 Examination of the mechanisms and techniques employed in the management of hotel/motel companies. Comparisons, case studies, and selected topics focus on equity structures, operations, marketing, and systems for a variety of public and private operations.

HOA 717 **Principles and Practices in Convention and Meetings Management** **3 credits**

Examination of the mechanisms and techniques employed in the management of convention and meeting industries. Comparisons, case studies, and selected topics focus on equity structures, operations, marketing, and systems for a variety of convention and meetings management issues.

HOA 718 **Principles of Casino and Gaming Management** **3 credits**

Examination of the mechanisms and techniques employed in the management of casino companies. Comparisons, case studies and selected topics focus on organization and department policies, production processes, manpower development, scheduling, and marketing for a variety of operating systems. Prerequisite: Consent of instructor.

HOA 720 **Principles and Practices in Food Service Management** **3 credits**

Examination of the mechanisms and techniques employed in the management of food service companies. Comparisons, case studies, and selected topics focus on equity structures, operations, multiunits, marketing, and systems for a variety of public and private operations. Prerequisite: HOA 461 or equivalent.

HOA 721 **Issues in Women's Nutrition** **3 credits**

Advanced discussion of how nutrition affects the physical and mental health of women throughout the life cycle and how to evaluate the validity of nutrition research as it relates to the needs of women rather than the general population.

HOA 725 **Information Technology in the Hospitality Industry** **3 credits**

Examines the current level of technology use, explores the potential uses of existing technology, and discusses new technologies in the hospitality industry. Prerequisite: Consent of instructor.

HOA 730 **Statistical Analysis for Hospitality and Leisure Services** **3 credits**

Introduction to the use of statistical techniques with emphasis on applications for the hospitality and leisure service industries.

HOA 735 **Research Methodology** **3 credits**

Examination of research methods including: the scientific method, literature review, sampling, statistics, research design, and analytical technique. Prerequisites: Graduate standing and HOA 730.

HOA 736 **Advanced Research Methodology** **3 credits**

Fundamental principles of multivariate data analysis, including the mathematics behind the statistical techniques studied. Examination of quantitative research methods including sample size determination, validity, reliability and detection and handling of outliers. Prerequisite: EPY 722.

HOA 737 **Philosophy of Science in Hospitality Research** **3 credits**

Exploration of the philosophical and sociological context of research, including different epistemologies, ontologies, and images of human nature and their influence on conceptualizing and designing research, collecting and understanding data, and disseminating findings. Implications and consequences of alternative approaches and perspectives of inquiry examined.

HOA 740 **Marketing Systems** **3 credits**

Development of marketing and advertising systems for hospitality industries based on both the need to create new markets and the need to respond to significant shifts in social and economic patterns.

HOA 741 **Dynamics of Tourism** **3 credits**

Examines major components of international and domestic tourism systems, including socio-economic effects. Legal and environmental problems, and managerial and planning functions.

HOA 742 **Customer Development Strategies for the Casino and Gaming Industry** **3 credits**

Analyzing marketing and promotional strategies utilized by the casino industry and developing understanding of valuative techniques that facilitate managerial decision making concerning these strategies. Prerequisite: HOA 718 or consent of instructor.

HOA 743 **Professional Training Applications** **3 credits**

Prepares students to plan, create, and conduct management and employee development programs. Process of learning essentials of training and presentation skill and management concepts. Students work with industry professionals.

HOA 745 **Human Dynamics and Organizational Leadership** **3 credits**

(Same as EDA 745 and BUS 745.) Provides students with knowledge, skills and attitudes necessary to undertake leadership responsibilities in complex organizations. Applies concepts and methodologies from social and behavioral sciences in the analysis of leadership behavior in diverse organizational and community settings.

HOA 751 **Hospitality Service Management** **3 credits**

Examines service marketing and management concepts relevant to the hospitality industry and explores how these concepts can be applied to service delivery systems in the hospitality industry.

HOA 756 **Culinary Arts Instruction** **1 credit**

Practical methods for improving culinary curriculum and instruction. Methods of instruction for culinary theory, cooking methods, mise en place, food service sanitation, menu development, culinary math, and food and beverage trends.

HOA 757 **Restaurant Management Instruction** **1 credit**

Practical methods for introducing restaurant management skills into the curriculum. Methods for instruction of food service purchasing and purchasing formulas, dining room service techniques, managing service, suggestive selling, advanced culinary techniques, and revenue management. Prerequisite: HOA 756

HOA 758 **Advanced Culinary Instructional Techniques** **1 credit**

Methods for introducing advanced culinary techniques into the curriculum. Methods for instruction of baking pastries and cakes, use of baking equipment, basic garde manger and food presentation skills. Prerequisite: HOA 757

HOA 759 **Advanced Food Service Management Instruction** **1 credit**

Practical methods for introducing advanced food service management into the curriculum. Capstone course for the food service management instructional series. Organization, design, and management of the different styles of restaurant operations. Prerequisite: HOA 758

HOA 760 **Research Seminar in Hotel Administration** **3 credits**

Student solutions to situation incidents and case studies in the lodging segment of the hospitality industry. Alternate semesters treat different topics. May be repeated once with consent of advisor and instructor. Prerequisite: Six graduate credits in hotel administration.

HOA 761 **Research Seminar in Food Service Administration** **3 credits**

Student solutions to incidents and case studies in the food segment of the hospitality industry. Alternate semesters treat different topics. May be repeated once with consent of advisor and instructor. Prerequisite: Six graduate credits in hotel administration.

HOA 762 **Research Seminar in Hospitality Education** **3 credits**

Exploration of problems related to programs and techniques of teaching in food service and lodging education, with emphasis upon the means of improving curriculum and instruction. May be repeated once with consent of advisor and instructor. Prerequisite: Six graduate credits in hotel administration.

HOA 763 **Research Seminar In Casino and Gaming Management** **3 credits**

Student solutions to situations, incidents and case studies in the casino segment of the hospitality industry. Alternate semesters treat different topics. May be repeated once with consent of advisor and instructor. Prerequisite: Six graduate credits in hotel administration including HOA 718.

HOA 775 **Seminar in Hospitality Finance** **3 credits**

Analysis and application of financial theories to hospitality firms and industry. May be repeated to a maximum of six credits. Prerequisites: HOA 705, FIN 701 or equivalent.

HOA 777 **Critical Issues in Hospitality Management** **3 credits**

Provides the opportunity to identify, explore, discuss, and analyze current critical issues and events important to the hospitality industry. Students communicate in research and writing the essence of a critical issue and prepare a verbal presentation to communicate a critical issue. May be repeated to a maximum of six credits.

HOA 778 **Readings in Hospitality Management** **3 credits**

Provides students with a knowledge and understanding of important research in their area of interest. Prerequisite: Doctoral student or consent of instructor.

HOA 779 **Issues and Trends for Hospitality Educators** **1 credit**

Explores issues and trends in hospitality education. May be repeated to a maximum of three credits. Prerequisite: Doctoral student.

HOA 781 **Independent Study and Research** **1-3 credits**

Consultation course consisting of individual student effort under guidance of the instructor. Students assigned to or request assignment to specific problems in hospitality management on the basis of interest and preparation. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor and graduate program director.

HOA 782 **3 credits**

Advanced Independent Study and Research

Consultation course consisting of individual student effort under guidance of the instructor. Students conduct independent research in their major area or work on the analysis of a problem for a hospitality organization. Prerequisite: Doctoral student.

HOA 790 **1-6 credits**

Special Topics in Hospitality Management

Eclectic approach to special problem areas of current interest employing individual and group research. May be repeated once with consent of advisor and instructor. Prerequisite: Six graduate credits in hotel administration.

HOA 791 **3 credits**

Professional Paper

Professional paper whose contents serve as the focus for the final oral examination. May be enlarged in scope and purpose for thesis credit. 3 credits.

HOA 798 **3-12 credits**

Dissertation

Dissertation Research. S/F grading only. 3-12 credits in three-credit increments. Prerequisite: Graduate standing in Ph.D. program and consent of advisor.

HOA 799 **3-6 credits**

Master's Thesis

Students may enroll in 1-3 credits per semester. A total of six credits are required for the thesis. S/F grading only. Prerequisite: HOA 735.

MHA courses have the same description as corresponding HOA courses.

- MHA 701 Operational Analysis in Hospitality Management
- MHA 703 Human Resources and Behavior in the Hospitality Industry
- MHA 705 Financial Analysis for Service Industries
- MHA 711 Laws of Innkeeping and Food Service
- MHA 716 Principles and Practices in Hotel Management
- MHA 717 Principles and Practices in Convention and Meetings Management
- MHA 718 Principles of Casino and Gaming Management
- MHA 720 Principles and Practices in Food Service Management
- MHA 725 Information Technology in the Hospitality Industry
- MHA 735 Research Methodology
- MHA 740 Marketing Systems
- MHA 741 Dynamics of Tourism
- MHA 742 Customer Development Strategies for the Casino/Gaming Industry
- MHA 745 Human Dynamics and Organizational Leadership
- MHA 751 Hospitality Service Management
- MHA 760 Research Seminar in Hotel Administration
- MHA 761 Research Seminar in Food Service Administration

- MHA 763 Research Seminar in Casino and Gaming Management

- MHA 775 Seminar in Hospitality Finance

- MHA 781 Independent Study-Consultation/Research on Selected Topic

- MHA 790 Special Topics in Hospitality Management

- MHA 791 Professional Paper

The following courses can be applied toward the M.S. degree requirements with the approval of the Associate Dean, College of Hotel Administration. A maximum of nine 600-level credits can be used in the graduate program. Students taking 600-level courses will be required to perform additional and/or more sophisticated work than their undergraduate counterparts. Courses taken as a hotel undergraduate at UNLV or elsewhere may not be repeated for graduate credit. For descriptions of 600-level courses, please consult the current Undergraduate Catalog where they are listed as 400-level courses.

- HOA 601 Hotel Law

- HOA 602 Employment Law in the Hospitality Industry

- HOA 607 Organizational Theory Applied to the Service Industries

- HOA 608 Labor Management Relations

- HOA 610 Hospitality Security and Preservation of Assets

- HOA 621 Feasibility

- HOA 622 Staff Planning and Operational Analysis for the Hospitality Industry

- HOA 625 Computer Application to the Hospitality Industry

- HOA 626 Accounting for the Casino Hotel

- HOA 637 Gaming Regulation and Control

- HOA 640 Casino Marketing

- HOA 642 Sociology of Gaming

- HOA 649 International Tourism

- HOA 653 The Management of Hospitality Service Delivery Systems

- HOA 655 Hotel Administration Seminar

- HOA 656 Employee Development

- HOA 660 Facilities Planning and Equipment

- HOA 670 Quantitative Methods and Applications in Casino Gaming

- HOA 670 Hotel Realty

- HOA 671 Practicum in Hotel Education

- HOA 674 Seminar in Hotel Research

- HOA 687 Association Management

Leisure Studies

Program Coordinator

Busser, James A. (1987), Professor; B.S., Illinois State University; M.S., Ph.D., University of Illinois at Champaign-Urbana.

Graduate Faculty

Carruthers, Cynthia P. (1990), Associate Professor; B.S., M.S., Ph.D., University of Illinois at Champaign-Urbana.

Holmes, David (1976), Professor; B.S., M.S., Indiana State University; Ph.D., University of Utah.

Pace, Debra (2004), Assistant Professor; B.S., M.Ed., Boston University; Ph.D., Ohio State University.

Peterson, Carol (2002), B.S., University of Illinois; M.A., San Jose State University; Ed.D., Columbia University.

Stahura, Kurt (2004); Assistant Professor; B.A., University of Wisconsin; M.A., Ph.D., University of Minnesota.

Leisure Studies offers a program of study that provides students with the theory, knowledge, and skills needed to assume management positions in sport and leisure service agencies. A variety of organizations across the country have a need for qualified management personnel who also possess a theoretical background in sport and leisure behavior.

Successful management of sport and leisure services is predicated on acquiring three areas of knowledge. First is a theoretical foundation in sport and leisure behavior. This background enables the manager to understand the motivations, expectations, and satisfactions of the participant and spectator and to incorporate these into events, programs, and services. Second is an understanding of management techniques specific to the delivery of sport and leisure service. These include a thorough background in the management, development, and operation of sport and leisure service delivery systems, facilities, programs, and ancillary services. Third is a research/analysis component that is designed to prepare the student to evaluate programs and services as well as analyze and interpret complex information. This component prepares the student for data based management applications and problem-solving techniques.

An important aspect of the degree program is the opportunity to develop a specialization in either Sport or Leisure Service Management. Specializations provide additional focused study that enable students to prepare for a career in a specific programmatic or organizational setting. The majority of the courses included in a specialization are selected in consultation with the student's advisor. Specialization courses may be selected to expand the student's knowledge in law and liability in sport and leisure, athletic administration, finance, budgeting, marketing, leisure needs assessment, program design and operation, program evaluation, and other courses pertinent to the specialized management of sport and leisure. Opportunities for individualized study of special topics and internships in sport and leisure service agencies also further individualize the student's preparation.

Successfully completing the program of study will result in conferral of the Master of Science degree in Sport and Leisure Service Management. Graduates of this program find employment with organizations providing professional, collegiate, and amateur sports; community, therapeutic, outdoor, and commercial recreation; and health and fitness services.

Master of Science in Sport and Leisure Service Management

Admission Requirements

Applicants must submit the following information for admission:

1. Application for admission.
2. Complete transcripts from all institutions attended. An overall undergraduate GPA of 2.75 or 3.00 (based on a 4.00 system) during the last 60 credits of undergraduate work.
3. Graduate Record Examination (GRE) scores. A minimum score of 450 in each of the GRE sections of verbal, quantitative, and analytical is expected.
4. Two letters of recommendation. These letters should be from individuals who know the student's academic capabilities and can predict success in graduate school.
5. A one-page statement describing the applicant's goals and reasons for seeking graduate education in sport and leisure service management.
6. Current resume.
7. A bachelor's degree with a major or minor in Leisure Studies, Recreation, Sport Management or a closely related field. Applicants not meeting this criterion may be required to take prescribed deficiency undergraduate courses.

Applicants who do not meet the above minimum GPA or GRE test score requirements may be admitted as Provisional Graduate Students.

Transfer of Credit

Nine credits of relevant graduate courses taken prior to admission to the Sport and Leisure Service Management degree may be accepted toward the student's official graduate program. These credits may be from another accredited university or from UNLV. However, the hours transferred must be: 1) graduate level, 2) received a grade of A or B (B- is not acceptable), 3) appropriate to the proposed degree, and 4) approved by the student's advisor and the Graduate Coordinator, and, 5) taken within the allowable six-year time limit on all course work. Additional graduate credits may be petitioned for transfer.

Progression of Graduate Program

Prior to completing 16 hours of graduate credit, the student in consultation with his/her advisor, will file a Graduate Degree Program. This program is a contract that specifies the courses necessary to obtain the master's degree. Any changes in the official program must be made on a Change of Degree Program form, approved by the advisor and graduate coordinator, and submitted to the Graduate College.

Concurrent with the filing of the Official Graduate Program, the student's Graduate Examination Committee is appointed. The committee consists of three graduate faculty members from the department and one outside graduate faculty member (usually from an appropriate cognate area in which the student has taken classes). Generally, the advisor serves as the committee chair.

Each master's degree candidate must complete a thesis or professional paper. In either case, a prospectus will be presented to the Examination Committee. After approval of the prospectus, the student may proceed with the project. Upon completion of the thesis or paper, the written document is provided to the Examination Committee members at least two weeks prior to an oral presentation and defense of the work before this group. Both the thesis and professional paper should adhere to the American Psychological Association's current Publication Manual regarding writing style and format. Copies of the completed thesis must also meet the Graduate College guidelines and be deposited according to published timelines. Professional papers must be bound and copies provided to the department office and advisor.

Degree Requirements

The Master of Science degree in Sport and Leisure Service Management requires a minimum of 36 graduate credit hours. Students are required to complete a nine-credit department core, a twelve-credit research/analysis requirement, and elect a fifteen-credit specialization in either Sport Management or Leisure Service Management. The courses required are specified below:

Department Core - 9 credits

SLS 702	Management in Sport and Leisure Service Organizations	3
SLS 703	Management Analysis of Sport and Leisure Service Organizations	3
SLS 716	Social Psychology of Sport and Leisure	3

Research/Analysis Requirement - 12 credits

The following six credits are required of all students:

HOA 735	Research Methods	3
HOA 730	Statistical Analysis in Hospitality and Leisure Studies	3
Students must elect one of the following two options:		
SLS 748	Professional Paper and one additional research or analytical course approved by the student's advisor	3
OR		
SLS 749	Thesis	3

Specialization - 15 credits

Students must elect one of the following two options:

Sport Management

SLS 704	Management Internship	3
	Nine additional credits approved by the student's advisor	9
SLS 717	Law and Liability in Sport and Leisure Services	3

Leisure Service Management

SLS 718	Programming in Sport and Leisure Service Organizations and 12 additional credits approved by the student's advisor	12
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Sports and Leisure Service

SLS 700 **3 credits**

Special Problems in Sport and Leisure

Specialized instruction and/or research designed to develop depth in understanding a current problem in sport and leisure. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SLS 701 **1-3 credits**

Independent Study

Independent study of a selected topic in sport or leisure service management or leisure behavior. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SLS 702 **3 credits**

Management in Sport and Leisure Service Organizations

Utilizes management theory in conjunction with theory of sport and leisure behavior to develop a philosophy of administration applicable to sport and leisure service organizations.

SLS 703 **3 credits**

Management Analysis of Sport and Leisure Service Organizations

Analysis of how the financial resources needed to operate sport and leisure service facilities and programs are acquired and marshaled to realize organizational goals. Marketing strategies and revenue source specific to sport and leisure services analyzed and discussed. Prerequisite: SLS 702.

SLS 704 **3 credits**

Management Internship

Structured management internship in a sport or leisure service organization which focuses on specific administrative functions under the supervision of an agency manager and a university advisor. Prerequisites: SLS 703 and approval of student's advisor.

SLS 716 **3 credits**

Social Psychology of Sport and Leisure

Introduces and examines the theories of sport and leisure behavior from a social psychological perspective. Issues and outcomes of involvement in sport and leisure activities for the individual as well as organized groups.

SLS 717 **3 credits**

Law and Liability in Sport and Leisure Services

Explores the legal principles and rules of law affecting the administration of recreation, sports and athletic programs. Emphasis on risk management theory, safety principles, insurance concepts and liability issues. Litigation trends identified and procedures outlined to minimize legal risks.

SLS 718 **3 credits**

Programming for Sport and Leisure Service Organizations

Theoretical and conceptual aspects of comprehensive programming for sport and leisure service organizations. Includes program development theories, program design concepts, advertising, promotion and evaluation procedures.

SLS 748 **3 credits**

Professional Paper

Under the direction of a faculty advisor, the student develops a written treatise detailing the application of a principle or theory to the solution of a current problem of professional practice in the management of sport and leisure service. S/F grading only. Prerequisite: Consent of instructor.

SLS 749 **3 credits**

Thesis

Under the direction of a faculty advisor, students develop a written treatise detailing their methodical investigation and exposition of a theory or principle related to the management of sport and leisure service. May be repeated to a maximum of six credits. S/F grading only. Prerequisite: Consent of instructor.

The following undergraduate course, if not previously taken, and if taught by a graduate faculty member, has been approved for use in graduate programs. Extra projects are assigned for graduate credit and these projects must be filed with the graduate coordinator. A full descriptions of this course may be found in the *Undergraduate Catalog* under the corresponding 400 number.

SLS 650 Administration of Recreation and Leisure Services

William S. Boyd School of Law

The William S. Boyd School of Law, which commenced classes in August 1998, is the first state-supported law school in Nevada history, and the only law school in the state. The school offers three juris doctor degree programs: a part-time evening program, a part-time day program, and a full-time, day program. These programs are designed to train ethical and effective lawyers and leaders for Nevada and for the legal profession. The curriculum is designed to stress professionalism, community service, and dispute avoidance/dispute resolution through a combination of skills training and traditional pedagogy and exposure to different public policy players and sources of law.

Richard J. Morgan, Dean

Dean

Morgan, Richard L., (1998) B.A., University of California, Berkeley; J.D., University of California, Los Angeles.

Associate Deans

Appell, Annette Ruth (1998) Professor and Associate Dean for Clinical Studies; B.A., Cornell University; J.D., Northwestern University School of Law.

Howarth, Joan (2001) William S. Boyd Professor and Associate Dean for Academic Affairs; A.B., Smith College; J.D., University of Southern California Law School.

Associate Dean and Graduate Coordinator

Smith, Christine (1998) Associate Dean for Administration and Student Affairs; B.S., Arizona State University; M.Ed., Northern Arizona University.

Faculty

Aldana-Pindell, Raquel (2000) Assistant Professor; B.A., Arizona State University; J.D., Harvard University Law School.

Anderson, Jennifer (2000) Legal Writing Professor; B.A., Arizona State University; J.D., University of Michigan Law School.

Bayer, Peter (2001) Legal Writing Professor; B.A., Hamilton College; J.D., New York University School of Law; M.A., New York University; LL.M., Harvard University.

Berkheiser, Mary E. (1998) Professor; B.A., J.D., University of Arizona.

Birdsong, Bret C. (2000) Associate Professor; B.A., Princeton University; J.D., University of California, Hastings College of Law.

Blakesley, Christopher L. (2002) Cobeaga Tomlinson Professor; B.A., University of Utah; M.A., Fletcher School of Law and Diplomacy; J.D., University of Utah; J.S.D., Columbia University.

Correales, Robert I. (1998) Assistant Professor; B.A., University of North Texas; J.D., University of Kansas School of Law; LL.M., Georgetown University Law Center.

Geer, Martin (2001) Externship Director; B.A., University of Michigan; J.D., Wayne State University; LL.M., Columbia University.

Grant, Douglas L. (1999) Cord Foundation Professor; B.A., University of Iowa; J.D., University of Colorado School of Law.

Guttentag, Michael (2005) Associate Professor; A.B., Harvard College; M.B.A., Harvard Business School; J.D., Yale Law School.

Henderson, Lynne (2000) Professor; B.A., J.D., Stanford University.

Higdon, Michael (2004) Legal Writing Professor; B.A., Erskine College; M.A., University of Nevada, Las Vegas; J.D., University of Nevada, Las Vegas.

Johnson, Steve R. (2001) Weigand Professor; B.A., St. Francis College; J.D., New York University School of Law.

Kindred, Kay P. (1999) Professor; B.A., Duke University; J.D., Columbia University School of Law.

Kruse, Katherine R. (2002) Associate Professor; B.A., Oberlin College; M.A., University of Wisconsin-Madison; J.D., University of Wisconsin Law School.

LaFrance, Mary (1999) William S. Boyd Professor; B.A., Bryn Mawr College; M.A., J.D., Duke University.

Lawless, Robert (2002) Gordon and Silver Professor; B.S., University of Illinois; J.D., University of Illinois.

Lazos, Sylvia (2003) Myron Leavitt Professor; B.A., St. Mary's University; M.A., St. Mary's University; J.D., University of Michigan Law School.

McAffee, Thomas B. (1998) Professor; B.S., University of Utah; J.D., University of Utah College of Law.

McGinley, Ann C. (1999) William S. Boyd Professor; B.A., Rosemont College; M.A., University of Delaware; J.D., University of Pennsylvania.

Mohr, Pamela (2001) Associate Professor; B.A., Carleton College; J.D., University of California, Los Angeles.

Nathanson, Rebecca (2003) James E. Rogers Professor of Education and Law, Assistant Professor, Joint Appointment with Department of Special Education; B.A., University of California, Los Angeles; M.A., University of California, Santa Barbara; Ph.D., University of California, Santa Barbara.

Patterson, Raymond W. (2005) Associate Director of the Saltman Center for Conflict Resolution; B.S., State University of New York, Stonybrook; M.A., Adelphi University; J.D., Cardozo School of Law.

Pindell, Ngai L., (2000) Associate Professor; B.A., Duke University; J.D., Harvard University Law School.

Pollman, Terrill (1998) Ralph Denton Professor and Director of Legal Research and Writing; B.A., J.D., University of Arizona.

Rowley, Keith (2001) Associate Professor; B.A., Baylor University; J.D., University of Texas Law School.

Samahon, Tuan (2004) Associate Professor; B.A., Brigham Young University; J.D. Georgetown University Law Center.

Saucedo, Leticia (2003) Associate Professor; A.B., Bryn Mawr College; J.D. Harvard Law School.

Scharf, Rebecca (2004) Legal Writing Professor; B.S., Brandeis University; J.D. Harvard Law School.

Stempel, Jeffrey W. (1999) Associate Dean for Academic Affairs and Professor; B.A., University of Minnesota; J.D., Yale Law School.

Sternlight, Jean (2003) Professor and Director of the Saltman Center for Conflict Resolution; B.A., Swarthmore College; J.D., Harvard University Law School.

Studwell, Roberta (2002) Professor; B.A., Arizona State University; M.L.S., University of Washington; J.D., University of Miami.

Tanenhause, David. (2002) James E. Rogers Professor of History and Law, Assistant Professor, Joint Appointment with Department of History; B.A., Grinnell College; Ph.D., University of Chicago.

Thronson, David (2002) Associate Professor; B.S., University of Kansas; J.D., Harvard University Law School.

Whitney, Jean M., (1999) Ralph Denton Legal Writing Professor; B.A., Minnesota; J.D., William Mitchell College of Law.

Wonsowicz, Pavel (2003) Director of Academic Success Program; B.A., Yale University, J.D., Boston University School of Law.

The mission of the William S. Boyd School of Law is to prepare students for the competent and ethical practice of law. At the same time, the Boyd School of Law recognizes that the skills and knowledge acquired in the juris doctor program may be transferred easily to other fields of endeavor and that many students seek legal training for the value it may have in pursuits other than the practice of law. The Boyd School of Law is dedicated to preserving, transmitting, and advancing the current state of legal knowledge, to developing programs which meet the changing needs of society, and to encouraging its graduates to apply the knowledge they gain for their own personal development and for the good of society. The curriculum responds to the needs of the students as well as the needs of the profession. In the early stages of legal education, the curriculum stresses professionalism, legal history, community service, and the roles and importance of lawyers in our society, all in an effort to acquaint students with the nature and nobility of the legal profession and with the opportunity that lawyers have to improve the society in which they live. Throughout the curriculum, emphasis is placed on writing, professionalism and community service, and in the final year, in our clinical and externship programs, we will provide students with the opportunity of a substantial lawyering experience under close supervision.

Admission Requirements and Selecting Applicants

The Boyd School of Law seeks to enroll an accomplished and diverse group of women and men who will contribute to the enrichment of the school's educational program and to the community and the profession after graduation. We seek students who have demonstrated significant accomplishments in their lives, for example by achieving distinguished academic records as undergraduate or graduate students, by engaging successfully in important and demanding careers, by providing significant service to their communities or by meeting challenges associated with the applicant's race, ethnicity, gender, economic status, or disability. We believe that the law school can and should have a student body that is both academically well qualified and diverse. The presence in the school of students who have diverse backgrounds, attitudes, and interests contributes to the breadth and quality of the classroom and non-classroom dialogue that is a critical element to legal education.

In assessing applicants, the Admissions Committee looks to:

1. **Academic Capability.** To assess an applicant's undergraduate academic capability, the committee considers such factors as the applicant's undergraduate GPA, the trend of college grades, the difficulty of the applicant's course of study, the quality and grading pattern of the undergraduate institution, the extent of work or other activities engaged in while in college, the date of the undergraduate degree, graduate studies, and performance on the Law School Admissions Test.

2. **Nonacademic Accomplishments.** The committee will consider evidence of significant accomplishments in extracurricular activities, employment, military service, and community service.
3. **Individual Background.** The committee will consider the applicant's state of residency, cultural, ethnic, racial and socioeconomic background, and evidence of significant handicaps overcome by the applicant. The committee will also consider any history of criminality or academic misconduct.

Applicants must:

1. have earned an undergraduate degree from an accredited four-year college or university.
2. have taken the Law School Admissions Test (LSAT). LSAT scores dating prior to June 1999 will not be considered.
3. register for and maintain an up-to-date file with the Law School Data Assembly Service.

Degree Requirements

To receive the Juris Doctor degree, students admitted to the law school must complete at least 89 units of credit with an overall cumulative average of at least 2.00, complete all of the specific requirements for graduation, including the community service and writing requirements and the third semester Lawyering Process course, and complete all required courses: LAW 503 Contracts, LAW 505 Lawyering Process I, LAW 515 Lawyering Process II, LAW 511 Civil Procedure/Alternative Dispute Resolution I, LAW 531 Civil Procedure/Alternative Dispute Resolution II, LAW 521 Property I, LAW 525 Property II, LAW 523 Torts, LAW 517 Constitutional Law I, LAW 616 Criminal Law, LAW 613 Professional Responsibility, and LAW 624 Constitutional Law II.

For additional information regarding admissions and law school programs, please call Assistant Dean Frank Durand or Associate Dean Christine Smith at (702) 895-3671.

Law

LAW 503

2-5 credits

Contracts

Overview of basic contract law. Exploration of common law legal method and the structure of article 2 of the uniform commercial code in the context of issues of contract formation. Prerequisite: Majors only, consent of instructor.

LAW 505

1-4 credits

Lawyering Process I

Students are introduced to basic legal research, interviewing skills, effective use of legal authorities in legal analysis and the conventions of predictive legal writing. The course is taught using readings, exercises, simulations, extensive individual feedback and conferences. Students will write several short assignments as well as longer office memos. Prerequisite: Majors only, consent of instructor.

LAW 511 **Civil Procedure/Alternative Dispute Resolution I** **2-3 credits**

Exploration of the nature and structure of dispute resolution systems, with a focus on formal adjudicatory procedure for civil lawsuits while exposing students to the spectrum and interrelation of dispute resolution systems. Topics covered include jurisdiction, venue, rules of procedure, choice of law.

LAW 515 **Lawyering Process II** **1-4 credits**

Students continue to develop skills in legal research, analysis, reasoning and writing. This course focuses on writing persuasively as an advocate, using increasingly complex simulations requiring analysis of statutory and administrative law materials. Assignments include letters to clients and attorneys, a trial court memorandum and an appellate brief, staged to allow for extensive individual feedback and instruction, and an oral argument to a mock appellate court. Prerequisites: LAW 505, majors only; consent of instructor.

LAW 517 **Constitutional Law I** **3 credits**

Examines judicial review, congressional power under the Commerce, Taxing, and Spending Clauses and section five of the Fourteenth Amendment; substantive due process rights; the role of the states and national government under the Tenth and Eleventh Amendments; and Separation of Powers. Prerequisite: Majors only, consent of instructor.

LAW 521 **Property I** **2-3 credits**

Acquisitions of property interest, estates in land and future interests, and landlord tenant. Prerequisite: Majors only, consent of instructor.

LAW 523 **Torts** **2-5 credits**

Law of civil injuries, including legal protection of personality, property and relational interests against physical, economic and emotional harms. Prerequisite: Majors only, consent of instructor.

LAW 525 **Property II** **2-3 credits**

Real estate transactions, easements and other servitudes, public land use regulation. Prerequisite: Majors only, consent of instructor.

LAW 531 **Civil Procedure and Alternative Dispute Resolution II** **2-3 credits**

Continuation of Civil Procedure and Alternative Dispute Resolution I. Topics covered include pretrial practice, pretrial dispositions, and court-imposed alternative dispute resolution mechanisms.

LAW 600 **Constitutional Law II** **3 credits**

Examination of fundamental protection for person, property, political and social rights. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 602 **American Legal History** **2-3 credits**

Examination of major issues in American legal history such as the role of lawyers in society and the role of law in developing the economy as well as the development of American legal institutions. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 603 **Federal Income Tax** **3 credits**

Overview of the code provisions governing the taxation of individual income and the basic concepts and legal doctrines which courts employ in implementing those provisions. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 604 **Administrative Law** **3 credits**

Examines the legal structure of federal and state government agencies; how they may be structured under the Constitution; how they issue and enforce regulations; and how they make decisions. Majors only or completion of first-year law courses or consent of instructor.

LAW 605 **Basic Bankruptcy** **3 credits**

Reviews the basic elements of business and consumer bankruptcy under federal bankruptcy statutes. Emphasis on problem solving and ethical issues. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 606 **Evidence** **3-5 credits**

Focuses on the Federal Rules of Evidence and the issues that arise out of their use. Provides understanding of the rules including both their theoretical basis and how they function in the courtroom. Addresses preparation and presentation of various kinds of evidence, including proof of writings; qualifications and examination of witnesses; privilege; opinion testimony; demonstrative, experimental, scientific evidence, determination of relevancy; application of the hearsay rule. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 607 **Family Law** **3 credits**

Basic family law. Covers legal construction of the family and relationship between the State and the family. Marriage, divorce, custody, and adoption. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 608 **3 credits**

Insurance Law

Overview of the theory and operation of insurance, including the marketing, underwriting, and claims process. Major forms of insurance surveyed with primary focus on issues of insurance policy construction and judicial resolution of recurring coverage issues. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 609 **1-3 credits**

Law and Literature

Study of real or functional depictions of lawyers and the legal system from a literary perspective to gain a new understanding of the law. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 610 **2-4 credits**

Advanced Legal Analysis and Writing: Special Topics

Develops lawyering skills through a series of exercises and at least one major assignment that analyzes complex legal problems. Assignments require analysis of various authorities and use of various forms of legal reasoning, types of argument and effective writing. Prerequisites: LAW 515; majors only; consent of instructor.

LAW 611 **2-3 credits**

Products Liability

Analyzes the substantive law, underlying theory and policy, and practice of products liability — liability for injuries by defective consumer products. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 613 **3 credits**

Professional Responsibility

Examines the law governing lawyers, the rules that govern how members of the legal profession, including judges as well as lawyers, may or must behave. Sources of these rules are many — the Constitution, statutes, procedural, evidentiary and court rules, and rules of professional conduct. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 614 **3 credits**

Real Estate Finance

Mortgages, deeds of trust, installment land contracts, construction financing, mechanics' liens, sales and leasebacks. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 615 **3 credits**

Secured Transactions

Covers Article 9 of the Uniform Commercial code with respect to taking security interests in personal property. Emphasis on interplay with real property security and bankruptcy and problem solving and ethical issues. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 616 **3 credits**

Criminal Law

Introduction to criminal law with emphasis on principles of criminal liability. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 617 **3 credits**

Disability Law

Examines the law of disability discrimination, focusing on the Americans with Disabilities Act of 1990 and other federal and state statutes, case law and regulations governing the civil rights of persons with disabilities to education, employment, public accommodations and housing. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 618 **3 credits**

Employment Discrimination Law

Examines the law of employment discrimination, focusing on Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Age Discrimination Employment Act of 1967 and other federal and state statutes, case law and regulations protecting the civil rights of employees and job applicants. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 619 **3 credits**

Employment Law

Surveys the law of employment relations focusing on common law exceptions to the employment at will doctrine through public policy, individual contracts, handbooks, and tort doctrine. Examines just cause provisions of the Model Termination Act. Analyzes common law and statutory protections afforded to employee speech and employee privacy, and examines federal wages and hours legislation. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 620 **3 credits**

Water Law

Acquisition and exercise of private rights in water, public rights and environmental protection, water distribution organizations, interstate water allocation, and federal-state relations in water resource management. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 621 **2-4 credits**

Intellectual Property I

Study of the law relating to the protection of literary, artistic, and musical material; copyright law, including publication, subjects protected, and extent of protection; aspects of unfair competition, and right of privacy. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 622 **2-3 credits**
Gaming Law
Study of the law relating to gaming activities with emphasis on the laws, policies and procedures that developed primarily through court decisions and developed separately, for the most part from the regulation and control of gambling through administrative agencies. Study of how gaming regulation impacts those who interact with gaming operators. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 624 **3 credits**
Constitutional Law II
Examines the Equal Protection Clause of the Fourteenth Amendment and related topics and the First Amendment's Free Speech and Free Press Clauses. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 625 **3 credits**
Law and the American Indian
Anthropological, historical, and legal study of the American Indians, including a focus on American Indian traditional law and values, federal policy and current legal issues. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 626 **3-4 credits**
Business Organizations I
Examines different forms of business organization, including corporations, partnerships and limited liability companies. Focuses on similarities and differences among these forms, and examines the roles, responsibilities and rights of the persons involved in business organizations. Does not cover federal regulation of securities or issuers. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 627 **3 credits**
Pretrial Litigation
Hands-on experience of the pre-trial litigation process in the federal court system. Students act as lawyers in a simulated civil case, interviewing and counseling clients, conducting legal research, drafting pleading, engaging in discovery practice, settlement negotiations and pre-trial motion practice. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 628 **3 credits**
Payment Systems
Examine the legal rules regarding how goods and services are paid for. Includes portions of Articles 3 and 4 of the Uniform Commercial Code, federal statutes regarding credit and debit cards, and the rules regarding negotiable instruments.

LAW 629 **3 credits**
Intellectual Property II
Covers federal copyright law and the state law right of publicity, with minor attention to some closely related doctrines. Fundamental principles and public policy questions of federal copyright law. Although some state law doctrines examined from time to time, copyright laws in the United States is almost exclusively federal. For students whose career interests include intellectual property or entertainment law. Also recommended for those interested in communications law, general business transactions, and/or commercial litigation.

LAW 630 **1-3 credits**
Community Property
Examines the law dealing with the classification, management and distribution of material property acquisition within the community property jurisdictions of the United States. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 631 **2-4 credits**
Remedies
Explores what lawyers and courts do to help someone who has been, or is about to be, wronged. In-depth look at the four major categories of remedies: damages, coercive remedies, declaratory relief and restitution. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 632 **2-3 credits**
Wills, Trusts and Estates
Examines interstate succession, family protection, execution of wills, will contests, will substitutes, creation of trusts, modification and termination of trusts, administration of estates and trusts. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 633 **2-3 credits**
Land Use Regulation
Focuses on public regulation of land use, including zoning, subdivision regulation, regulation of urban growth, etc. Include the planning process, constitutional limitations on land use controls, state and regional regulation, aesthetic regulation and discriminatory zoning, and private land use alternatives. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 634 **2-3 credits**
Federal Courts
Examines federal jurisdiction and the law of federal-state relations. Covers federal judicial powers, congressional allocation of jurisdiction, choice of law, district court jurisdiction, appellate review, civil judicial reform, 42 USC Section 1983, Implied Right of Action, 11th Amendment and Federal Habeas Corpus. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 635 **Conflict of Laws** **2-3 credits**

Focuses on the problem of choosing which jurisdiction's law should be applied to transactions, relationships, or events with contracts in more than one jurisdiction. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 636 **Child, Parent and the State** **2-3 credits**

Explores the legal relationships between children, their parents, and the state, covering such issues as the child as an autonomous being, the child's role in the family, family autonomy, and the obligations of parents and the state to children. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 637 **Sales and Leases** **2-3 credits**

Examines advanced issues in the sale of goods both domestically and internationally. Studies also looks into leasing of goods and the sale of goods over the Internet. Statutes involved include Article 2 and 2A of the UCC, the Convention on the International Sale of goods and other state laws and federal laws on electronic commerce. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 638 **Education Law and Policy** **2-3 credits**

Examines six distinct and highly visible areas of education law and policy, primarily in K-12: compulsory education; school governance and due process; school finance; private schools; religion and public schools; and, equal educational opportunity.

LAW 639 **Feminist Jurisprudence** **2-3 credits**

Explores feminist theory in relation to the law. Examines the historical foundations of women's legal subordination as well as the various strands of feminist legal theory. Specific units of study may include topics such as affirmative action, comparable worth, work and family, education, sexual harassment, domestic violence, the teaching and practice of law, pornography and free speech, abortion and others. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 640 **Labor Law** **2-3 credits**

Explores the employer-employee-union relationship, its historical and economic development and its modern statutory framework.

LAW 641 **Entertainment Law** **2-3 credits**

Surveys a wide range of legal issues pertinent to live and recorded entertainment, including intellectual property rights, contract formation and breach, regulatory schemes, labor issues, and first amendment considerations. Prerequisite: Intellectual Property II.

LAW 642 **Law and Social Justice** **2-3 credits**

Examines the role of law in creating, perpetuating, and dismantling hierarchies of power and privilege in society, particularly those based on social/ethnic groupings, gender, socio-economic class, sexual orientation, and disabilities. Enables students to read law critically with an understanding of the ways in which techniques, practices and rhetorical strategies can exclude and subordinate based on categories of identity.

LAW 643 **Legislation and Statutory Interpretation** **2-3 credits**

Explores some of the various procedural, constitutional, and jurisprudential issues raised by a study of the unique role that state and federal legislatures play in constitutional order. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 644 **Juvenile Law** **2-3 credits**

Examines the procedural and substantive law and judicial administration relating to juvenile justice. Primary area of concentration: rights of accused juvenile, police conduct and detention, reference for adult prosecution, adjudication, treatment vs. punishment, and the roles of the lawyer in the juvenile court system. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

Law 645 **Lawyering Theory and Practice** **2-4 credits**

Students study and perform a range of tasks and services perform by practicing attorneys in the representation of clients. Exercises engaged in include counseling, assessment of legal problems, efforts and resolution and claims activity, including litigation and defense through complaints, motions, discovery, and trial-related activity.

Law 646 **Cyberlaw** **2-4 credits**

Study of legal issues attending use of computers and electronic communications and commerce, including intellectual property concerns related to cyberspace and features such as websites, e-commerce and communications.

LAW 647 **Civil Rights Litigation** **2-4 credits**

Students examine, analyze and evaluate the various stages of a complex case involving a civil rights claim made pursuant to the Constitution, federal anti-discrimination statutes, or common law. Prerequisites: LAW 515, majors only, consent of instructor.

LAW 648 **3 credits**
Health Care Liability and Quality Regulation
Explores ways in which the law promotes the quality of health care through licensing certification, and accreditation of health care professionals and institutions and also addresses liability issues in the health care context. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 649 **2-3 credits**
Taxation of Business Entities
Surveys federal income taxation of business entities and their owners, including corporations, partnerships, LLC's, and LLP's. Prerequisite: LAW 603 Federal Income Tax, majors only or completion of first-year law courses or consent of instructor.

LAW 650 **1-3 credits**
Estate and Gift Tax
Examines the federal taxation regime applicable to inter vivos gratuitous transfers and inheritances. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 651 **2-3 credits**
Environmental Quality Law
Provides an overview of the law and policy of environmental quality and pollution control. Addresses the origins and development of modern statutory environmental law as it relates to the various media: air, water and soil. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 652 **2-3 credits**
International Public Law
Introduction to the doctrines, institutions and methodology of modern international law. Students examine the legal systems governing relations among states, and its expansion to non-state actors. Also analyzes the application on international law in domestic courts, international tribunals and organizations, doctrines of jurisdiction and immunities and human rights. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 653 **3 credits**
Criminal Procedure I
Basic course in criminal procedure. Covers laws regulating daily interactions of police and public, including laws of search and seizure and of interrogations. Does not cover rights subsequent to interrogation. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 654 **2-3 credits**
Public Lands and Natural Resources Law
Provides an introduction to federal public lands and natural resources law. Focuses on the laws and legal systems that govern the classification and use of the federally owned lands comprising a third of America and the vast majority of the West. Examines major resource areas, including: minerals, timber, range, wildlife, recreation, wilderness, and cultural resources. Explores the interplay between environmental, economic, cultural, social and political factors in managing national parks, forest, and the public domain. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 655 **2-3 credits**
Securitization
Examines the financing technique of securitization and its various legal underpinning. Securitization is a trillion dollar industry that raises issues in corporate finance, secured transactions, bankruptcy and securities regulation. Prerequisite: Majors only or completion of first-year law courses or consent of instructor, and LAW 615 or Business Associations.

LAW 656 **2-3 credits**
Business Organizations II
Covers the law of publicly-traded corporations. Special attention will be given to the fiduciary duties of boards of directors; management, and controlling shareholders; proxy regulation and shareholder voting; insider trading; shareholder litigation and mergers and acquisitions. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 657 **1-3 credits**
Antitrust
Basic legal framework for regulating conduct to undermine competitive markets. Topics include antitrust regulation of horizontal agreements between competitors to restrain trade, such as price-fixing, output restrictions, boycotts and mergers; vertical agreements between suppliers and purchasers such as distributional restraints, exclusive dealing, and tying; and unilateral conduct, such as monopolization and attempted monopolization. Role of antitrust law in today's technological environment. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 658 **1-3 credits**
Immigration Law
Covers legal issues and policies pertaining to non-citizens of the United States, including the regulation of admission, exclusion, and deportation of immigrants seeking to enter the United States. Rights of non-citizens who are in U.S. territory in the areas of health, education, and labor. Topics covered from various perspectives, including constitutional law, international human rights, comparative law, ethics and morality and history. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 659 **2-3 credits**
First Amendment Rights
Explores in depth critical First Amendment Freedoms—Freedom of Expression and Association, Freedom of Press and Media, and Freedom of Religion. Prerequisites: LAW 517.

LAW 660 **3 credits**
Banking Law
Basic understanding of the federal and state laws governing traditional commercial banks and financial institutions in the United States at the end of the course, the students will have a solid foundation which they can use to study more specific areas of law regarding such institutions. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 661 **1-5 credits**
Federal Taxation
Surveys the three major federal tax topics: income tax (two-fifths of course), taxation of business entities (two-fifths), and estate and gift tax (one-fifth). Students may enroll for all three components (5 credits), or two components, or one component (credits depending on components taken). Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 662 **3 credits**
Civil and Criminal Litigation in Tax
Examines tax controversy resolution mechanism. Not limited to tax students. Helpful for all interested in litigation career, including civil litigation and white collar crime. Also, good to hone drafting skills. Students prepare pleadings, memos, and other controversy-related documents. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 663 **2-3 credits**
Advanced Issues in Tax
Seminar. In consultation with the professor, students select a topic of current interest and importance in federal, state, or international taxation. Students write research papers on topic and present and defend them in class. Prerequisites: Majors only or completion of first year law courses, or consent of instructor.

LAW 664 **3 credits**
Criminal Procedure II
Covers law and practices between the time defendant is charged and final disposition and sentencing. Includes prosecutorial discretion, bail, plea bargaining right to counsel, due process, sentencing, and post-conviction review. Prerequisites: Majors only or completion of first year courses or consent of instructor.

LAW 665 **3 credits**
Health Care Organization and Finance
Laws and legal issues relating to the organization and operation of health care enterprises and the financing of health care services. Prior or concurrent enrollment in LAW 626 desirable but not required. Prerequisites: Majors only or completion of first year courses or consent of professor.

LAW 666 **3 credits**
Domestic Violence and the Law
Examines violence against women and others in intimate relationships and the ways in which the law impacts and is impacted by domestic violence. Explores the history and social context of domestic violence and the dynamics and dimensions of abusive relationships. Prerequisites: Majors only or completion of first year courses or consent of professor.

LAW 667 **3 credits**
International Criminal Law
Covers the basics of public international law in the context of international criminal law including the nature of international crime, aspects of the international substantive system of laws, and specific offenses, as well as how this law is adjudicated and enforced. Specific offenses covered will include both international and transnational crimes as well as the procedural and adjudicative mechanisms established to deal with these offenses. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 668 **4-5 credits**
Commercial Law: Core Concepts in Secured Transactions and Payments Systems
Gives students a familiarity with, and the ability to manipulate, basic concepts in secured transactions (Article 9 of the Uniform Commercial Code) and certain aspects of payment systems (Articles 3,4 and 5 of the Uniform Commercial Code). Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 669 **3 credits**
Legal Drafting: Special Topics
Drafting legal documents such as contracts, leases, will, by-laws, and employment agreements. Recognizing the importance of determining the client's objectives, researching the relevant law, organizing the document effectively, and drafting with accuracy, clarity, brevity, and appropriate tone. May be repeated to a maximum of six credits. Prerequisites: LAW 505, LAW 515; majors only; consent of instructor.

LAW 670 **3 credits**
Alternative Dispute Resolution Survey
Students learn about negotiation, mediation, arbitration, and other forms of dispute resolution that are alternative or supplemental to litigation. The course will include theory, discussion, simulations, and lectures. Prerequisites: 500-level courses; majors only; consent of instructor.

LAW 671 **3 credits**
Judicial Writing
Introduces students to the style and form of judicial writing and will include research and writing assignments typical in either trial or appellate courts. Student will also learn about the roles of courts in American law and society, the internal workings of courts, and the roles and ethical obligations of various court staff. Prerequisite: LAW 505, LAW 515; majors only; consent of instructor.

LAW 672 **3 credits**
International Business Transactions
Explores a wide range of legal problems involving international trade, licensing, and investment issues. Prerequisites: Majors only or completion of first-year law courses or consent of instructor.

LAW 673 **3 credits**
Estate Planning
This course will cover various estate planning strategies, including but not limited to, the estate planning process, wills and living trusts, gifting considerations, life insurance, limited partnerships and limited liability companies and charitable giving.

LAW 674 **3 credits**
**Perspectives on the Law—
History and Jurisprudence**
This course explores American Legal History and the best thinking about the nature of law and how it functions.

LAW 710 **2-3 credits**
The Bill of Rights in Law and History
Read recent works on the Bill of Rights and consider contemporary and historical questions about the meaning and purpose of the Bill of Rights or one of its particular provisions. Topics include federalism, populism, the role of reason in conceptualizations of the Constitution and Bill of Rights, the problem of unenumerated rights and issues raised by the incorporation controversy. Prerequisite: Constitutional Law.

LAW 711 **2-3 credits**
Children in Society: Selected Problems
Examines issues related to laws and policy governing the place and treatment of children in American society. Specific issues vary somewhat based on current events and student interest, but generally focus on legal and policy issues affecting the meaning of the state's parents-partial obligation, the parent-child relationship and the family.

LAW 712 **2-4 credits**
Trial Advocacy
Students design, execute, and practice the lawyering tasks specifically associated with actual courtroom trials, including opening statements, direct examination, cross-examination, evidentiary objectives, and closing arguments. Students perform these tasks in the context of hypothetical cases. Prerequisites: Prior or concurrent enrollment in LAW 606 and LAW 515.

LAW 713 **2-4 credits**
Interviewing, Counseling and Negotiations
Studies three principal forms of lawyering that take place outside the courtroom. Examines issues of client relations, decision-making and ethics in dealing with opponents as well as in guiding clients. Simulated exercises performed by students. Prerequisite: LAW 610.

LAW 714 **2-4 credits**
Alternative Dispute Resolution Practicum
Engages in simulated situations involving various means of alternative dispute resolution in action, including simulated forms of mediation, arbitration, and various hybrids of ADR. Prerequisite: LAW 531.

LAW 715 **2-3 credits**
Mediation
Examines the theory, practice, and public policy of mediation. Focusing particularly on issues of relevance to attorneys representing clients in mediation, the course will include simulations. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 716 **1-3 credits**
Society of Advocates
Students participate in forensic competitions, such as moot court and trial practice, involving legal research and analysis and brief writing as well as oral arguments or other advanced lawyering tasks. Prerequisites: LAW 515, majors only; consent of instructor.

LAW 717 **2-4 credits**
Arbitration
Examination of the history and use of arbitration as well as its current legal status. Focus will be on substantive legal doctrines of arbitral enforcement of arbitration agreements, and on arbitration particularly enforcement of arbitration agreements, and on arbitration procedure, particularly the manner in which arbitration may be conducted in various contexts. Prerequisite: LAW 610.

LAW 718 **3 credits**
Advanced Advocacy: Special Topics
Focuses on conducting more sophisticated legal research, analysis of complex legal problems and writing documents that would be submitted to a court or quasi-judicial decision-maker. At least one assignment will involve multiple drafts and students may also be required to make an oral presentation. Prerequisites: LAW 505 and LAW 515; majors only; consent of instructor.

LAW 719 **2-3 credits**
Negotiation
Examines the theory, practice, and public policy of negotiation. Focusing particularly on issues of relevance to attorneys representing clients in negotiation, the course will include numerous simulations. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 723 **3 credits**

Economics and the Law

Application of economic analysis to the topics confronted in litigation. Topics include: microeconomic theory, property rights, contracts, torts, discrimination, eminent domain, copyrights, patents, antitrust and criminal law. Prerequisites: ECO 302 or MBA 710, or consent of instructor.

LAW 724 **1-3 credits**

Law Practice Management

Study how to maintain law practice for clients, including not only law office management but also issues of handling client funds, legal ethics, and economics of successful law practice. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 725 **1-3 credits**

Gaming Policy Seminar

Studies gaming policy and sophisticated legal issues surrounding gaming law and regulation, primarily through case studies. Focuses on legislative and administrative action as well as litigation. Prerequisite: Majors only or completion of first-year law courses, LAW 622 and LAW 623 or consent of instructor.

LAW 726 **2-3 credits**

Separation of Powers Law

Explores the separation of powers in federal constitutional system. Topics covered include allocation of authority in the Constitution relating to the conduct of American foreign policy and the conduct of war-making activities. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 727 **2-3 credits**

International Human Rights Law

Studies the norms, procedures, and the actors of international human rights. Explores the U.S. role in international human rights, the US policies that motivate its involvement, and the significance of international human rights as US domestic law. Explores the legal and moral complexities of implementing universal principles of human rights and introduce the mechanics of the practice of human rights domestically and internationally. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

LAW 728 **2-3 credits**

Bioethics and the Law

Seminar explores law and policy relating to bioethical issues. Coverage of issues varies somewhat based on current events and student interest. Topics may include abortion, genetic screening, defining death, the "right to die," and research involving human subjects. Prerequisites: Majors only, consent of instructor.

LAW 729 **2-3 credits**

Advanced Legal Research

Expands the research skills that have been introduced in Lawyering Process I as well as introduce topics. Focuses

on practitioner oriented materials and their use. In addition, research in specific subject areas also explored. Prerequisite: Majors only, consent of instructor; LAW 505, LAW 515, LAW 610.

LAW 730 **2-3 credits**

Business Bankruptcy

Studies financially distressed businesses with emphasis on business reorganizations under Chapter 11 of the Bankruptcy Code. Emphasizes lawyering skills and may include students representing parties in a simulated Chapter 11. Prerequisites: Majors only, or completion of first year courses or consent of professor; either LAW 605 or LAW 615.

LAW 731 **2-3 credits**

Seminar in Race, Gender, Sexual Orientation and the Law

Students select the specific topics covered. Examines race, ethnicity, culture, gender, and sexual orientation and how legal norms address tensions raised by such diversity.

LAW 732 **3 credits**

Privacy, Publicity & Defamation

Discusses constitutional right to privacy, the four privacy torts, contrast between right of privacy and right against defamation, and right of publicity. Prerequisites: Majors only or completion of first year courses or consent of professor.

LAW 733 **2-3 credits**

Advanced Intellectual Property Seminar

Course covers advanced topics in copyright, trademark and unfair competition law, trade secrets, and patent law. Prerequisites: LAW 621, LAW 629, majors only or completion of first-year law courses or consent of instructor.

LAW 734 **1 credit**

Income Taxation of Estates and Trusts

Examines federal income taxation of estates, trusts, and income in respect of decedent. Considers effect on estate, planning and administration. Prerequisites: LAW 603, majors only, completion of first-year courses or consent of instructor.

LAW 735 **1-3 credits**

U.S. Taxation of International Transactions

Examines how the federal income tax applies to out-bound (U.S. persons doing business abroad) and in-bound (foreign persons doing business in U.S.) transactions. Also examines tax treaties. Prerequisites: LAW 603, majors only or completion of first-year law courses or consent of instructor.

LAW 736 **1-3 credits**

Securities Regulation

A study of federal and state securities regulation, including statutes, administrative rules, decisions and interpretations, cases governing the duties of participants in securities offerings, and other securities transactions. Coverage will include registration, disclosure, and antifraud provisions and, time permitting, may include international and comparative topics.

LAW 750 **Congressional Externship** **3-6 credits**

Explores the legislative process by placing students in legislative offices in Washington D.C. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 751 **Judicial Externship** **3-7 credits**

Explores the role of the judiciary in the legal system by means of in-class discussions and field placements in judicial chambers in federal and state courts in the state of Nevada. Prerequisite: Majors only, consent of instructor.

LAW 752 **Legislative Externship** **1-12 credits**

Explores the state legislative process by placing students in the Legislative Counsel Bureau Office in Carson City and Las Vegas. Students assigned to work with the Legislative Counsel Bureau, the House and Senate Judiciary Committees and interim committees. Prerequisite: Majors only or completion of first-year law courses or consent of instructor.

LAW 760 **Law Journal** **1-3 credits**

Academic credit for successful completion of work by a member of the Law Review. S/F grading only. Prerequisite: Successful completion of writing competition and selection by the instructor.

LAW 769 **Education Clinic** **3-6 credits**

Students will represent children and their adult educational decision makers in educational matters in administrative foray including informal and formal hearings within Nevada school systems and possibly in state and federal court. Students, teamed with professionals from other disciplines, will also work on educational policy and advocacy.

LAW 770 **Child Welfare Clinic** **1-6 credits**

Under direct supervision of the professor, students represent clients in civil litigation regarding child protection, termination of parental rights, adoption or other related matters. In order to represent clients in court, students must be licensed under Nevada's student practice rule. Course also has classroom component.

LAW 771 **Juvenile Justice Clinic** **1-6 credits**

Under direct supervision of the professor, students represent juveniles in juvenile court and district court proceedings involving charges of criminal conduct. To represent these clients, students must be licensed under Nevada's student practice rule for court appearances. Course also has classroom component. Prerequisites: LAW 616, LAW 613, majors only or completion of first-year courses or consent of instructor.

LAW 773 **Government & Public Interest Externship** **1-12 credits**

Designed to provide experiential learning opportunities in a variety of public law agencies including the offices of the U.S. Attorney, Special Public Defender, Clark County District Attorney and Federal Defender. Supervised fieldwork is coupled with a weekly seminar. Pre or Corequisite: Professional responsibility.

LAW 774 **Capital Defense Clinic** **1-6 credits**

Under direct supervision of the professor, students work on legal teams representing capital defendants. The classroom component of the course will emphasize death penalty law, lawyering skills, and professionalism issues. Students must be able to be certified for student practice under the applicable court rules. Prerequisite: Second year standing.

LAW 775 **Immigration Clinic** **1-6 credits**

Under direct supervision of the professor, students represent clients in judicial and administrative proceedings involving immigration and related matters. The course will have a classroom component emphasizing immigration and naturalization law, lawyering and professionalism. Students must be eligible to represent clients under the applicable student practice rules.

LAW 776 **Natural Resources Field Seminar** **2 credits**

Course offers students an opportunity to explore advanced natural resources law issues both in the field and through traditional classroom discussion and research. Topics include rangeland management, wildlife management, endangered species protection, forest management, the Colorado ecosystem and fire management. Prerequisites: LAW 654 or LAW 620 or consent of instructor.

LAW 780 **Directed Readings** **1-3 credits**

Students earn credit for completing readings under the supervision and approval of a faculty member. Prerequisites: Majors only; consent of instructor required.

LAW 781 **Directed Research** **1-3 credits**

Students research and write about a legal topic of their choice under the guidance and supervision of a faculty member who has approved their choice of topic. Students further their knowledge of the area, as well as their legal research and writing skills. Prerequisite: Majors only, consent of instructor.

LAW 790 **Special Topics in Law** **2-4 credits**

Involves the study of a specialized topic in law that is not covered elsewhere in the law school curriculum. The particular topic will be announced during registration for the semester in which the course is offered. May be repeated to a maximum of six credits. Prerequisites: Majors only or completion of first year law courses or consent of instructor.

College of Liberal Arts

The College of Liberal Arts offers eight Master of Arts degrees along with an M.F.A. in creative writing. Doctoral programs in English, History, Anthropology, Sociology, and Psychology are also available. Ranging across the college's two subdivisions of the humanities and social sciences, these programs are ably staffed by nationally recognized scholars.

These faculty, who have earned advanced degrees from many of the nation's most prestigious universities, actively pursue research and creative activities that advance their professions and often benefit the larger community. These endeavors are especially important since graduate education requires an understanding of the methodology for producing knowledge as well as the mastery of bodies of information. Small classes and individual attention further enhance the learning experience of each of these programs. In short, prospective graduate students in the College of Liberal Arts may confidently expect to participate in programs characterized by rigorous intellectual pursuit and careful, conscientious instruction.

Edward Shoben, Dean

Anthropology

Chair

Simmons, Alan H. (1993), Professor; B.A., University of Colorado, Boulder; M.A., University of Toronto; M.A., Ph.D., Southern Methodist University.

Graduate Coordinator

Swetnam, John J. (1973), Professor; B.A., University of Pittsburgh; Ph.D., University of Pennsylvania.

Graduate Faculty

- Arriaza, Bernardo T. (1992), Associate Professor; B.S., Universidad del Norte, Arica, Chile; M.S., Ph.D., Arizona State University.
- Bao, Jiemin (1997), Assistant Professor; B.A., Laotian University; M.S., Ph.D., University of California, Berkeley.
- Benyshek, Daniel (2001), Assistant Professor; B.A. University of Colorado, Denver; M.A., Ph.D., Arizona State University.
- Cassman, Vicki (1999), Assistant Professor; B.A., M.S., University of California, Davis; M.S., University of Delaware; Ph.D., Arizona State University.
- Harry, Karen (2001), Assistant Professor; B.A., Texas A&M; M.A., Ph.D., University of Arizona.
- Jankowiak, William (1991), Professor; B.A., State University of New York; B.A., Ph.D., University of California, Santa Barbara.
- Knack, Martha (1977), Distinguished Professor; B.A., M.A., Ph.D., University of Michigan.
- Miranda, Malvin (1976), Professor; B.A., California State University, Long Beach; M.S., Ph.D., University of California, Los Angeles.
- Roth, Barbara (2002), Assistant Professor; B.S. University of Colorado; M.A., Ph.D., University of Arizona.
- Spencer, Rainier (1997), Assistant Professor; B.A., University of Texas at El Paso; M.A., Columbia University; Ph.D., Emory University.
- Thompson, Jennifer L. (1998), Assistant Professor; B.A., M.A., Trent University; Ph.D., Durham University.
- Urioste, George L. (1974), Professor; B.A., St. Peter Claver College; Ph.D., Loyola University; B.D., Boston College; M.A., Ph.D., Cornell University.

Desert Research Institute Cooperating Faculty

- Beck, Colleen (1994), Professor; B.A., M.A., Ph.D., University of California, Berkeley.
- Buck, Paul (1994), Assistant Professor; B.A., California State University, Chico; M. A., Ph.D., University of Washington.
- Johnson, William (1994), Associate Professor; B.A., Florida International University; M.A., University of South Florida; Ph.D., University of Florida.
- Rhode, David (2000), Associate Professor; B.A. University of California, Davis; M.A., Ph.D., University of Washington.

Professors Emeriti

- Brooks, Richard H. (1966-1992), Emeritus Professor; B.A., San Francisco State College; M.A., University of California, Berkeley; Ph.D., University of Colorado, Boulder.
- Brooks, Sheilagh T. (1966-1992) Emeritus Distinguished Professor; B.A., M.A., Ph.D., University of California, Berkeley.

Lyneis, Margaret M. (1976-2001), Emeritus Professor; B.A., University of Washington; M.A., Ph.D., University of California, Los Angeles.
 Palmer, Gary B. (1973), Emeritus Professor; B.S., Hamline University; M.S., Ph.D., University of Minnesota.
 Warren, Claude N. (1969-1997), Emeritus Professor; B.A., M.A., University of Washington; Ph.D., University of California, Los Angeles.

The Department of Anthropology offers studies leading to the Master of Arts and Doctor of Philosophy degrees. At UNLV, students may concentrate in socio-cultural anthropology, physical anthropology, linguistics, or archaeology. Generally, students may participate in field and laboratory research in archaeology, field and laboratory research in physical anthropology, and field experience in various areas of ethnology and museum studies. The faculty offers particular expertise in the nearby Great Basin, Mojave, and Desert Southwest, as well as MesoAmerica, South America, China, and the Near East/Mediterranean region. The Patricia Anne Rocchio Memorial and the Edwards and Olswang Scholarships are awarded to anthropology students each year. Graduate assistantships are available, with responsibilities relating to archaeology, physical anthropology, cultural anthropology, and linguistics. The Desert Research Institute and the Marjorie Barrick Museum of Natural History provide some part-time employment opportunities for qualified students. Various assistantships to aid in faculty research also are available periodically.

Master of Arts

Admission Requirements

1. In addition to the general admission requirements established by the Graduate College, the applicant should have earned 18 semester credit hours in anthropology accepted by the department, with at least a 3.00 average in those courses. It is preferred that as many of the four subdisciplines as possible be represented among those courses and approximately one half of the 18 hours be at the upper-division level.
2. Applicants must submit a research paper representative of their undergraduate work. If the student did not major in anthropology as an undergraduate, a research paper in another field indicative of the student's ability is acceptable.
3. Applicants must also submit an explicit letter of intent.
4. GRE scores are required for admission to both the M.A. and Ph.D. programs. There is no required minimum score, but scores will be used in combination with other information in the application to evaluate the applicant. The exam must be taken within five years preceding the deadline for the application to be considered.

Degree Requirements

In addition to the general requirements established by the Graduate College, the candidate must meet the following degree requirements:

1. The student must earn a minimum of 33 semester hours of credit at the graduate level. Courses shall be selected in consultation with the student's graduate advisor and

formalized on the Graduate College's "A Proposed Degree" form, which is to be completed prior to the completion of 16 credits of work. Eighteen of the 33 units presented for the degree must be courses with the prefix ANT at the 600-level or above, including ANT 703 and ANT 704, which are required core courses. ANT 703 and 704 may be taken only after the student's acceptance into the Graduate College. The 18 credits in anthropology must also include a designated course in research design. Up to three credits each, of ANT 701 and ANT 799 can be applied toward the degree but may be taken only after acceptance into the Graduate College. At least three 700-level courses, beyond the core courses (ANT 703 and ANT 704) and excluding ANT 701 and ANT 799, must be taken. No course work below the 600-level will count toward the M.A. A 600-level course may be applied to the degree only if the corresponding course with the same title was not previously taken at the 400-level. At least six hours, beyond the core courses or ANT 701 or ANT 799, must be taken in the student's subdiscipline. These may be either 600- or 700-level courses, but one must be at the 700-level. In addition, an introductory statistics course must be taken if the student has not had such a course as an undergraduate. This course will be considered remedial and will not count towards the student's 30 semester hours.

2. To remain in good standing, the student must maintain a 3.00 average in all work undertaken after admission to the graduate program and must receive no more than one C.
3. During the first year after admission to the program, a student must complete ANT 703 and ANT 704. To continue in the program, a student must earn a grade of B- or better in these two courses. Each course covers two subdisciplines. A student must attain a satisfactory level of achievement (B- or better) in each subdiscipline in order to receive a B- or better for the entire course. If a student obtains a B- or better in only one subdiscipline of either ANT 703 or ANT 704, the student must complete that portion of the course in which they are deficient the next time it is offered. If a C+ or less is received in either ANT 703 or ANT 704, the student will be dropped from the anthropology graduate program. The examination in each of the core courses, ANT 703 and ANT 704, consists of two parts, a written examination and an oral examination. The written examination is a take-home exam compiled by the core course coordinator from questions submitted by faculty from the appropriate subdisciplines. The oral examination is conducted by faculty and may deal with core course materials including lectures, in-class discussions, and assigned readings, as well as specifics of questions and answers from the written exam.
4. A thesis is required. The thesis (minimum of six credit hours) requires original research undertaken in the field, laboratory, museum, or library. The thesis must conform to the regulations established by the Graduate College and the department. Each candidate undergoes an oral examination on the thesis, conducted as prescribed by the Graduate College.

Doctor of Philosophy

Admission Requirements

1. Applicants must meet the general admission requirements established by the Graduate College. Normally, only applicants possessing a master's degree in anthropology, or its equivalent, from an accredited institution are considered for admission. Students entering with an approved M.A. will not be required to go through the department's M.A. program, but they may be required to take remedial courses in the case of deficiencies. Applicants without an M.A. in anthropology should have a minimum of 18 semester credit hours in anthropology distributed among all traditional subdisciplines of the field.
2. The applicant must have at least a 3.50 (A=4.00) grade point average for previous graduate work.
3. The applicant must submit an example of their previous research, preferably a published paper; a copy of their thesis or a relevant research paper is also acceptable.
4. The applicant must submit a detailed statement of intent (1-2 pages) outlining proposed research. In addition, the applicant must identify specific members of the faculty with whom they may wish to work.
5. Three letters of recommendation must be provided attesting to the applicant's ability to conduct doctoral-level work. At least two of the letters must be from academic references.
6. The applicant must submit GRE scores and transcripts; foreign applicants must submit TOEFL scores.

Degree Requirements

1. A minimum of 42 credits of approved work beyond the M.A. must be completed. This will not include remedial courses. The 42 credits and any remedial work must be passed with an average grade of B or better. No more than one grade may be a C, and no grade may be lower than a C. Within the 42 credits, there will be a cap of three credits each of independent study and directed readings and 12 hours for the dissertation.
2. Of the minimum 42 credits, 18 must be in anthropology graduate seminars. Six of these must be in ANT 703 and 704, unless the applicant can successfully petition out of the core courses. Three of the 18 must be in a designated course in research design.
3. In consultation with his/her advisor, a student will organize a dissertation committee of at least three departmental members. In addition, a fourth member outside the department will be assigned by the Graduate College. Another outside member may be added at the department's discretion.
4. The student must demonstrate a competence in statistics by passing an appropriate advanced class.
5. The student must pass a comprehensive examination with a grade of B or better in the method and theory of one subdiscipline, in one topical area, and in one regional area. Students who fail in any portion of the exam may retake that portion the following year. A second failure results in termination from the doctoral program.

6. After passing the doctoral comprehensive examination, the student must submit to the department a written dissertation proposal approved by the dissertation committee prior to the commencement of fieldwork or research. The student also must present a defense of this proposal to the academic community. After successfully completing these tasks, the student is advanced to candidacy.
7. The student will then conduct approved anthropological research to gather data needed for writing the dissertation. This may involve fieldwork, laboratory research, or research on a theoretical topic, but in any case must represent an original contribution to knowledge.
8. The student must submit and successfully defend their dissertation. This defense is open to the public.

Anthropology

ANT 701 **3 credits**
Directed Reading in Anthropological Literature
(May be repeated to a maximum of six credits.)

ANT 703 **3 credits**
Core Seminar I: Ethnology and Linguistics
Advanced treatment of the major concepts and theories in ethnology and linguistics. Research methods and standards of scholarly presentation emphasized. Prerequisite: Graduate standing.

ANT 704 **3 credits**
Core Seminar II: Archaeology and Physical Anthropology
Advanced treatment of the data, concepts, and theories in archaeology and physical anthropology. Prerequisite: Graduate standing.

ANT 730 **3 credits**
Seminar in Linguistic Anthropology
Holistic approach to linguistic anthropology to examine how language reflects the culturally relative structure of experience, determines ethnic identities and social structures, tells about prehistoric connections between cultures, and influences the evolution of the human brain. Prerequisite: Graduate standing.

ANT 735 **3 credits**
Seminar on Classic Ethnographies
Classic ethnographies read in the original, selected to represent a wide range of culture types, culture areas, and theoretical perspectives. Broadens and deepens students' control of the professional database, while exploring how data support theoretical constructs and how theory in turn informs ethnographic methods and descriptions. Prerequisite: Graduate standing.

ANT 736 **3 credits**
Problems in North American Ethnology
Selected cases from Native North America used to learn logic and methods for resolving conflicts in ethnographic

data and data interpretation. Impact of those arguments and decisions on significant current theoretical constructs pursued. Prerequisite: Graduate standing.

ANT 741 **Seminar in Cultural Processes** **3 credits**

Theories of culture change on selected topics. Topics to be announced. May be repeated to a maximum of 12 credits. Prerequisite: Consent of instructor.

ANT 742 **Seminar on Material and Cognitive Approaches to Culture Change** **3 credits**

Survey of complementary theoretical approaches to culture change, with a stress on materialist (Marxist, New Functionalist, classical economic, and ecological) and cognitive (structuralist, psychological) theoretical systems. Integration of approaches in analyzing culture change in a particular ethnographic situation.

ANT 743 **Seminar in Method and Theory in Cultural Anthropology** **3 credits**

Research and discussion of selected topics relating to data gathering, interpretation, or theoretical explanation in sociocultural anthropology. Specific topics and instructor vary. May be repeated to a maximum of six credits.

ANT 745 **Seminar on Native American Ethnohistory** **3 credits**

Controversial issues in the ethnohistory of Native North America used to explore the relationship between data and interpretation. Student research projects develop specific skills in accessing public and rare documents to aid solution of ethnographic problems. Prerequisites: ANT 432 and ANT 301/ETS 301, or HIST 438 and HIST 439, or written consent of instructor.

ANT 746 **Gender, Sexuality, Race and Flexible Citizenship** **3 credits**

Analyzes how gender and sexuality converge with race and class, and how people negotiate gender, sexual and racial differences. Explores the concept of cultural citizenship among different ethnic groups in relation to sex/gender and race. Prerequisite: Graduate standing.

ANT 747 **Seminar in Western North America** **3 credits**
(May be repeated to a maximum of six credits.)

ANT 748 **Seminar on Current Research in the Great Basin** **3 credits**

State of current research on several problems currently being raised by Great Basin data in all subdisciplines of anthropology explored in order to investigate the relationship between data, generalization, abstraction, and theoretical interpretation. Attendance at the Great Basin Anthropological Conference required. Prerequisite: ANT 423 or ANT 623.

ANT 751 **Seminar on Current Problems in Archaeology** **3 credits**
May be repeated to a maximum of six credits.

ANT 752 **Seminar in Historic Archaeology: Current Trends** **3 credits**
Examines current developments in historical and anthropological method and theory as applicable to the field.

ANT 754 **Archaeology and Paleoecology of the Great Basin** **3 credits**

Examines paleoenvironments and prehistory of the Great Basin and intermountain west, including Nevada and surrounding states. Issues include Pleistocene and Holocene paleoenvironmental reconstruction, Paleoindian and Archaic adaptations, Fremont culture, and spread of Numic-speaking populations. Field trip. Prerequisite: Graduate standing or consent of instructor.

ANT 755 **Seminar in Archaeological and Historic Preservation** **3 credits**

Management of archaeological resources; laws and policies protecting archaeological sites, methods of identification, and evaluation of archaeological resources; the interface of archaeological preservation and archaeology as a scientific discipline.

ANT 756 **Southwestern Archaeology I: PaleoIndian and Archaic Prehistory** **3 credits**

Examines the earliest evidence for human occupation in the Southwestern United States. Specific issues to be addressed include paleoenvironment, settlement distribution and site/artifact types, subsistence strategies, cultural change, and agricultural origins. Prerequisite: Consent of instructor.

ANT 757 **Southwestern Archaeology II: Later Prehistory** **3 credits**

Examines the prehistoric formative societies of the American Southwest, including the Hohokam, Mogollon, and Anasazi, with emphasis on the Virgin Anasazi; to include issues of social organization, subsistence, production, distribution and exchange, and the dynamics of change in the region. Prerequisite: ANT 418 or consent of instructor.

ANT 759 **Peopling of the Americas** **3 credits**

Reviews current debates surrounding human colonization of North and South America during the Pleistocene, drawing upon archaeological, biological, and linguistic evidence. Field trip. Prerequisite: Graduate standing or consent of instructor.

ANT 761 **Seminar on Current Thought in Physical Anthropology** **3 credits**

Topics to be announced. May be repeated to a maximum of six credits. Prerequisites: Consent of instructor.

ANT 762 **3 credits**

Laboratory Seminar on Osteology

“Hands-on” class relevant to research and analysis in human osteology and palaeopathology. Laboratory analysis of osteological and palaeopathology materials available in the Physical Anthropology Laboratory. Methods of age, sex, ethnic determinations, discrete morphological, anthropometric, and palaeopathological research and analysis. Prerequisite: ANT 462.

ANT 763 **3 credits**

Paleoanthropology

Current issues in and evidence for human biocultural evolution. Include finding, dating, and naming fossil hominids, the effect of climate on hominid evolution, as well as issues in paleobiology, functional anatomy, prehistoric archaeology, and geomorphology. Prerequisite: Consent of instructor.

ANT 770 **3 credits**

Seminar on Computing for Anthropologists

Provides practical introduction to the uses of computers for statistical analysis, data gathering and storage, computer modeling and computer-assisted instruction as applies in anthropology. Every student carries out one or more projects requiring the use of computers. Prerequisite: MIS 101 or CSC 115 or equivalent or consent of instructor.

ANT 775 **3 credits**

Native Americans and the Law

(Same as LAW 625.) Anthropological, historical, and legal study of the position of Native American tribes and persons, including federal policy, jurisdictional disputes, and current issues. Prerequisite: Graduate standing.

ANT 790 **3 credits**

Research Design, Professional Ethics, and Grant Writing for Anthropologists

Class components include ethics relating to data acquisition and sharing, formulating cohesive and compelling research questions, and the mechanics of proposal preparation required in professional practice. All students will be required to prepare and present a research proposal. Prerequisites: Graduate standing or consent of instructor.

ANT 796 **3 credits**

Cultural Resource Management Internship

Students work with an archaeologist both in field and office situations, focusing on identification and evaluation of sites; writing technical reports and examining the development of correspondence between federal agencies and contracting archaeologists. Prerequisites: One field class (ANT 453, 485, 486) and one lab class (ANT 452, 458) or one summer field school (ANT 487, 488), senior or graduate standing and recommendation of UNLV faculty coordinator.

ANT 797 **3-6 credits**

Thesis

May be repeated but only six credits will be applied to the student’s program. S/F grading only.

ANT 798 **3-12 credits**

Dissertation

May be repeated but only 12 credits will be applied to the student’s program. S/F grading only.

ANT 799 **1-3 credits**

Independent Research

May be repeated to a maximum of six credits.

The following undergraduate courses, which are listed at the 400-level in the *Undergraduate Catalog*, may be used in the program of study with the approval of the student’s advisor:

- AAS 633 Contemporary Issues in Afro-American Studies
- ANT 610 Introduction to Museum Methods
- ANT 613 Museum Operation
- ANT 617 Archaeology of the Southern Nevada and California Deserts
- ANT 619 Archaeology of Mexico and Central America
- ANT 623 Indians of Nevada and Utah
- ANT 627 Introduction to Ethnographic Field Methods
- ANT 629 Applied Anthropology
- ANT 630 History of Anthropology
- ANT 632 Ethnohistory
- ANT 633 Psychological Anthropology
- ANT 635 American Indian Mythology and Religion
- ANT 637 The Anthropology of Aging
- ANT 638 Medical Anthropology
- ANT 641 Comparative Social Structure
- ANT 642 Comparative Political Organization
- ANT 643 Issues of Political Economy in Anthropology
- ANT 644 Anthropology of Power
- ANT 645 Theories of Culture Change
- ANT 646 Economic Anthropology
- ANT 647 Magic, Witchcraft, and Religion
- ANT 648 American Indian Languages and Cultures
- ANT 649 Ethnological Method and Theory
- ANT 655 Near Eastern and Mediterranean Prehistory
- ANT 657 Environmental Archaeology
- ANT 658 Laboratory Methods in Prehistoric Archaeology
- ANT 659 Archaeological Methods and Theory
- ANT 660 Diseases and Human Evolution
- ANT 661 Human Genetics Variations
- ANT 662 Human Osteology
- ANT 667 Techniques of Forensic Research
- ANT 668 Selected Topics in Physical Anthropology
- ANT 669 Dental Anthropology
- ANT 670 Language and Culture
- ANT 671/
- 672 Advanced Linguistics I and II
- ANT 673 Bioarchaeology
- ANT 674 Advanced Human Osteology
- ANT 675 Human Growth and Aging
- ANT 683 Analytical Methods and Research Design in Anthropology
- ANT 688 Archaeology Field Practicum
- ANT 691 Linguistic Colloquium
- ETS 603 The Hispanic in the U.S. Today
- ETS 607 Making Gender, Sexuality, and Race
- ETS 634 Constructions of Racial Ambiguity
- ETS 635 Malcolm X

English

Chair

Hudgins, Christopher C. (1976), Professor; B.A., Davidson College; M.A., Ph.D., Emory University.

Graduate Coordinator

Harp, Richard L. (1975), Professor; B.A., Ph.D., University of Kansas; M.A., Boston College.

Graduate Faculty

Barnstone, Alik (1999), Professor; B.A., M.A., Brown University; Ph.D., University of California, Berkeley.
Becker-Leckrone, Megan (1999), Assistant Professor; B.A., Bryn Mawr College; M.A., Ph.D., University of California, Irvine.
Bowers, John M. (1987), Professor; B.A., Duke University; M.A., Ph.D., University of Virginia; Master of Philosophy, Oxford University.
Brown, Stephen (2002), Assistant Professor; B.A., University of California, Santa Barbara, M.A., Ph.D., University of South Florida.
Campbell, Felicia Florine (1962), Professor; B.S., M.S., University of Wisconsin, Madison; Ph.D., United States International University, San Diego.
Decker, Christopher (2004), Assistant Professor; B.A., Yale University; Ph.D., Cambridge University.
Dodge, Robert K. (1970), Professor; B.A., Rice University; M.A., Ph.D., University of Texas.
Engberg, Norma J. (1969), Associate Professor; B.A., George Washington University; M.A., University of Florida; Ph.D., University of Pennsylvania.
Erwin, Timothy (1990), Associate Professor; A.B., Marquette University; M.A., Ph.D., University of Chicago.
Gajowski, Evelyn (1991), Associate Professor; B.A., Cleveland State University; M.A., Ph.D., Case Western Reserve University.
Hafen, Jane (1993), Associate Professor; B.A., M.A., Brigham Young University; Ph.D., University of Nevada, Las Vegas.
Harter, Carol (1995), Professor and President, University of Nevada, Las Vegas; B.A., M.A., Ph.D., SUNY Binghamton.
Hickey, Dave (1991), Professor; B.A., Texas Christian University; M.A., University of Texas.
Irsfeld, John H. (1969), Professor; B.A., M.A., Ph.D., University of Texas.
Jablonski, Jeffrey (2000), Assistant Professor; B.A., M.A., State University of New York College at Buffalo; Ph.D., Purdue.
Keelan, Claudia (1996), Associate Professor; B.A., Humboldt State University; M.F.A., University of Iowa.
LoLordo, Vincent Nicholas (2002), Assistant Professor; B.A., M.A., Dalhousie University; Ph.D., Harvard University.
Mays, Kelly J. (2001), Assistant Professor; B.A., Emory University; Ph.D., Stanford University.
McCullough, Joseph B. (1969), Distinguished Professor; B.Ed., Gonzaga University; M.A., Ph.D., Ohio University.
Moore, Sharon (1999), Assistant Professor; B.A., M.A., Roosevelt University; Ph.D., University of Georgia.
Perez, Vincent (1999), Associate Professor; B.A., University of California, Santa Cruz; M.A., Ph.D., Stanford University.
Rosenberg, Beth Carole (1994), Associate Professor; B.A., Douglass College, Rutgers University; M.S., Ph.D., New York University.
Rusche, Philip (1998), Assistant Professor; B.A., M.A., Emory University; M.A., M.Phil., Ph.D., Yale University.
Soyinka, Wole (2001), Professor and Endowed Chair of Creative Writing.
Stevens, Anne (2004), Assistant Professor; B.A., University of Chicago; M.A., Ph.D., New York University.

Stitt, J. Michael (1981), Associate Professor; B.A., Pennsylvania State University; M.A., Ph.D., Indiana University.
Tillery, Denise (2004), Assistant Professor; B.A., Ph.D., University of New Mexico; M.A., University of North Carolina.
Unger, Douglas (1991), Professor; B.A., University of Chicago; M.F.A., University of Iowa.
Unrue, Darlene H. (1972), Distinguished Professor; B.A., M.A., Marshall University; Ph.D., Ohio State University.
Unrue, John C. (1970), Professor; B.A., M.A., Marshall University; Ph.D., Ohio State University.
Weinstein, Mark A. (1970), Distinguished Professor; B.A., Cornell University; M.A., Ph.D., Yale University.
Whitney, Charles (1988), Associate Professor; B.A., San Francisco State College; Ph.D., City University of New York.
Wiley, Richard (1989), Professor; B.A., University of Puget Sound; M.A., Sophia University; M.F.A., University of Iowa.

Professors Emeriti

Adams, Charles L., Jr. (1960-1996), Emeritus Professor; B.A., Michigan State University; M.A., University of Illinois; Ph.D., University of Oregon.
Coburn, W. Leon (1969), Associate Professor; B.A., University of New Mexico; M.A., Ph.D., University of California, Davis.
Geuder, Patricia (1966-1989), Emeritus Associate Professor; B.A., M.E., University of Nevada, Reno; Ph.D., University of New Mexico.
Hazen, James F. (1971), Professor; B.A., Princeton University; M.S., Ph.D., University of Wisconsin

The Department of English offers programs of study leading to the Master of Arts, Master of Fine Arts, and Doctor of Philosophy degrees. The M.A. program involves primarily course work at the graduate level in English and American literature or in language studies. A thesis is optional but is recommended for all students. Work toward this degree is designed to supplement and complete the student's undergraduate study in the field of English and to familiarize the student with professional standards, methods of research, and modes of thought in the discipline. Possession of this degree normally leads to advancement in the teaching profession for the secondary school or community college teacher, to careers in writing, publishing and editing, or to further study in English at the doctoral level.

The M.F.A. program is designed to be a three-year, intensive studio arts terminal degree with a strong international emphasis and requires the writing of a book-length creative thesis in either fiction or poetry. The objectives of the M.F.A. degree are to enable the student to master the craft of writing in the chosen genre to a publishable level; to train the student in both traditional literary topics and in writing pedagogy to the end of a teaching career at the university, college, or community-college level; and to provide for the student an international perspective on both the creation and publication of fiction or poetry and on the teaching and appreciation of literature.

The Ph.D. program is a highly specialized program designed to train students for careers in teaching at the college or university level and to develop in them a capacity for research, original thought, and writing that ordinarily accompanies such careers. The doctoral program is entirely focused on literary study; there is no language-study or writing option in it. At the time of admission the student chooses three areas in which to specialize: (1) a

chronological period, (2) a literary genre, and (3) either an additional chronological period, a major author chosen from outside of the selected chronological period and approved by the graduate committee, or a special topic approved by the graduate committee. All subsequent course work (which includes a minor in a field or fields related to English) is devoted to developing a high degree of professional competence and knowledge in the three chosen areas of specialization. Such knowledge is tested in qualifying examinations and is also the basis upon which the student writes a doctoral dissertation.

The department, in conjunction with the International Institute of Modern Letters, also offers a program leading to the degree of Doctor of Philosophy in English, with a Creative Dissertation. This program centers on the study of English and American literature and is designed to train students for careers in teaching of English at the college or university level, as well as for careers in writing, editing, and publishing. The program of study includes course work in English and Creative Writing, a Qualifying Examination, and a creative Dissertation. Admission is for holders of an MA or MFA. Differences in the requirements for admission and degree requirements between the two Ph.D. programs are indicated below.

Master of Arts

Admission Requirements

A candidate must meet the requirements of the Graduate College, including holding an undergraduate GPA of 2.75 or better. Applicants must send two official sets of transcripts from all universities attended; one set goes to the Graduate College and one directly to the English Department. Also, two letters of recommendation must be sent directly to the department. The department also requires a minimum of 21 credits in English courses that are above Freshman Composition level. Also, students must score in the 50th percentile rank or higher on the Verbal portion of the General Test and in the 25th percentile rank or higher on the Literature in English Subject Test of the Graduate Record Examination. Candidates for admission need not have been English majors but should show on the transcript a generally superior performance in English courses.

Degree Requirements

These vary somewhat according to the option chosen (see below), but in general the M.A. program involves 30-33 credit hours of course work, demonstrated competency in the reading of one foreign language, and successful performance on a comprehensive examination. Students who did not take History of the English Language (ENG 415 or 615) as an undergraduate must include it in their graduate degree program. A master's thesis, which carries six credits, is optional. Nine credits of the course work must be in literary periods before 1800, nine credits in literary periods after 1800, and the remainder of the credits may be in any period or area. ENG 791, College Teaching in Language and Literature, required of new graduate assistants, does not count toward fulfilling the credit hours requirement.

Options

Students may emphasize literary study or language study in their degree programs. The exact requirements for these options or tracks within the M.A. program are stated in a document obtainable from the Director of Graduate Study.

Thesis

A master's thesis, which carries six credits, is optional but recommended for all M.A. candidates. It is normally written during two consecutive semesters and must conform to the guidelines set forth by the Graduate College in this catalog and in its Thesis and Dissertation Manual. The M.A. thesis should be an original contribution to knowledge about a suitable literary or linguistic subject and comprise about seventy-five pages. Thesis projects must be designed, developed, and written in close consultation with an appropriate thesis advisor and with the student's thesis committee.

A statement showing in more detail the specific degree requirements of the M.A. program is available from the Director of Graduate Study.

Master of Fine Arts

Admission Requirements

Applicants for the M.F.A. in Creative Writing must submit a strong manuscript of either poetry or fiction for consideration, of approximately 10-15 pages for poetry and 20-30 pages for fiction. The primary consideration for admission is the quality of the creative manuscript as judged by the Creative Writing faculty. Also, candidates must send a letter of application to the Graduate Committee that includes a statement of purpose and reasons why the applicant wants to study creative writing at the University of Nevada, Las Vegas. A candidate must also meet the requirements of the Graduate College, including holding a B.A., B.S., or A.B. degree from an accredited college or university with an undergraduate GPA of 2.75 or better. Applicants must send two official sets of transcripts from all colleges or universities attended; one set goes to the Graduate College and one directly to the English department. In addition, two letters of recommendation must be sent directly to the department. There is a wide range of acceptability with regard to an applicant's previous record of studies and major field of specialization as an undergraduate. But a candidate must score in the 50th percentile rank or higher on the Verbal portion of the General Test of the Graduate Record Examination to be eligible for admission.

Degree Requirements

The M.F.A. in Creative Writing requires 54 credit hours of course work, independent study, and the writing of a creative dissertation in either fiction or poetry. Course work should include 12 credits of ENG 705, Creative Writing, composed of nine credits in the chosen genre of concentration (either poetry or fiction) and three credits in another genre. Students will be expected to take at least nine credits of 700-level courses in World Literature, and at least nine credits of 600- or 700-level graduate courses offered by the Department

of English. Also required are six credits of Independent Study: three credits for the completion of a significant translation of superior quality from a language other than English, and three credits for the writing of a substantial scholarly essay of at least 5,000 words on some aspect of a major world writer or field of literary study. In addition, six credits are required for the international focus of the M.F.A. (see below) and 12 credits for the completion of a book-length creative dissertation in either poetry or fiction.

International Emphasis

The strong international emphasis of the M.F.A. in Creative Writing requires all students to spend at least one semester abroad, in a non-English speaking country, and to earn at least six credits toward the M.F.A. by enrolling in a university, school, or institute abroad and/or by Independent Study guided and monitored by a member of the Creative Writing faculty. Applicants with strong experience and demonstrable study and residency in a non-English speaking country and with significant foreign language skills may be granted credit at the time of admission for the study abroad requirement at the discretion of the Creative Writing faculty and of the Graduate College.

Creative Thesis

All candidates for the M.F.A. degree are required to write a creative thesis in either poetry or fiction and to complete at least 12 credits toward the creative thesis requirement by intensive work in conference with members of the faculty. An oral qualifying exam will be given at the end of the student's third semester of full-time study, or upon completion of 24-27 credits toward the degree. This exam will entail a one- to two-hour review of the student's progress in his or her creative and scholarly work, conducted by the faculty in the student's genre. Successful completion of the oral qualifying examination is a prerequisite for beginning work on the creative thesis. The creative thesis for the M.F.A. will be a book-length manuscript and must conform to the guidelines set forth by the Graduate College in this catalog and in its Thesis and Dissertation Manual. The M.F.A. creative thesis will only be passed and the M.F.A. degree granted when the creative thesis is judged to be a substantial creative work of high seriousness and literary merit in the opinion of the Creative Writing faculty and the student's creative thesis committee.

Doctor of Philosophy

Admission Requirements

1. Possession of an M.A. in English from an accredited institution with at least 21 credits in English and American literature on the graduate transcript and a graduate GPA of 3.50 or better. Applicants must send two sets of official transcripts from all universities attended; one set goes to the Graduate College and one directly to the English department. Students wishing to enter the Creative Writing Track may possess either an M.A. in English as stated above or an M.F.A. in Creative Writing from an accredited institution.

2. Candidates must score in the 75th percentile rank or higher on the Verbal portion of the General Test and in the 50th percentile rank or higher on the Literature in English Subject Test of the Graduate Record Examination.
3. Three letters of recommendation specifically for Ph.D. study from professors of English.
4. Two or three writing samples totaling at least 30 pages of literary criticism, history or analysis and offering substantial evidence of the student's ability to do work at the doctoral level. Students wishing to enter the Creative Writing Track must submit a 50-page (or longer) writing sample of the candidate's creative work, to be read and judged by the Creative Writing faculty.
5. A letter of application to the Graduate Committee stating the applicant's reasons for wanting to enter the program and the intended areas of specialization.

Degree Requirements

1. A total of 30 credits of approved course work beyond the M.A. degree, as follows:
 - a. Twenty-four credits in English with grades of B or better, including ENG 703 (Survey of Critical Theory), required for students who have not taken an equivalent graduate-level course. Of the required 24 hours credits, at least 18 credits must be taken at the 700-level. Students writing a Creative Dissertation must take 24 credits in non-Creative Writing English classes, including Editing. This may include English 729, to be taken only once.
 - b. Six credits in an approved minor at the graduate level outside the department or in Composition Studies, with grades of B or better. Students in the Creative Writing track must take six credits in ENG 705 (Creative Writing).
2. Reading knowledge of two foreign languages or proficiency in one. Students in the Creative Writing track demonstrate a reading knowledge of one foreign language.
3. Superior performance on qualifying examinations in the student's three areas of specialization. These examinations consist of three four-hour written exams: one in the historical period of specialization, one in the genre of specialization, and a third in either an additional chronological period, a major author approved by the graduate committee, or a special topic approved by the graduate committee, and a two-hour oral examination.
4. Doctoral dissertation involving original thought and superior scholarship on a topic or author in British, American, or third-world literature in English. The Creative Dissertation involves an original work of fiction or poetry of high quality and substantial length. (18 credits).

The total credits for course work and dissertation are a minimum of 48 beyond the M.A. degree. Courses taken to make up deficiencies or to fulfill the requirement in foreign languages (unless the minor is in a foreign literature) do not count in this total.

A brochure outlining in more detail the admission and degree requirements of the Ph.D. program, including the foreign language requirement, the possible areas of specialization, the minor, the Qualifying Examination, and a representative course of study, is available from the Director of Graduate Study.

English

ENG 700 **3 credits** **Bibliography and Methods**

Bibliography, reference tools, introduction to scholarly methods, modern research techniques in language and literature, preparation and presentation of documented investigation. To be taken in the student's first year of graduate study.

ENG 701 **3 credits** **Contemporary Composition Theory**

Theories that underline contemporary composition as a discipline and a profession, including the practical implications of literacy as it relates to college writing instruction, administration, and practice. Prerequisite: Graduate standing.

ENG 702 **3 credits** **History of Rhetoric and Composition**

Survey of ancient, medieval, Renaissance, enlightenment, and twentieth-century texts that establish terminologies and raise issues still vital to the theory and practice of composition and language study today. Prerequisite: Graduate standing.

ENG 703 **3 credits** **Survey of Literary Criticism and Theory**

Surveys criticism and theory from Plato to contemporary trends. Provides historical perspective on the toolbox of theoretical approaches to literature vital in literary studies today. Emphasis may vary from year to year. Required for Ph.D. students. Prerequisite: Graduate standing.

ENG 704 **3 credits** **Theory and Practice of Textual Editing**

Examination of theories of scholarly editing. Topics include: variant and critical editions, textual recension, rationale for copy text, emendation, annotation, and copy editing. Student work on editions in progress, as well as journals sponsored by the department.

ENG 705 **3 credits** **Creative Writing**

Advanced study and practice of creative methods. May be repeated to a maximum of twelve credits. Prerequisite: Admission to the M.F.A. program or consent of instructor.

ENG 711 **3 credits** **Studies in Language**

Introduction to advanced study of language based on sequence of problems involving such procedures as the history of language, etymology, structural linguistics, and linguistic geography. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

ENG 712 **3 credits** **Studies in Modern Grammar**

Examination of important current approaches to grammatical descriptions, especially of English. May be repeated to a maximum of six credits.

ENG 715 **3 credits** **Theory of Translation**

Readings in the theory of translation, as well as textual analysis of existing translations to and from several different languages. Taught in English. Prerequisite: Advanced knowledge of one foreign language, consent of instructor.

ENG 716 **3 credits** **Workshop in Translation**

Explores problems inherent in the translation of foreign texts; completion of individual and group projects, with assistance of instructor. May be repeated to a maximum of six credits. Prerequisite: Advanced knowledge of one foreign language, consent of instructor.

ENG 719 **3 credits** **Area Linguistics**

Historical overview of area linguistics, with emphasis on principles of dialectology in the English speaking world and the principles of linguistic atlases in the United States and Canada.

ENG 720 **3 credits** **Studies in Medieval Literature**

Intense study of selected topics in medieval literature. May be repeated to a maximum of six credits.

ENG 722 **3 credits** **Studies in Chaucer**

Study of major works of Geoffrey Chaucer in relation to their medieval literary and cultural context. Prerequisite: Graduate standing or consent of instructor.

ENG 723 **3 credits** **Studies in the Renaissance**

Intensive study of selected topics in sixteenth-century literature. May be repeated to a maximum of six credits.

ENG 724 **3 credits** **Studies in Early Seventeenth-Century Literature**

Intensive study of selected literary topics in early seventeenth-century literature. May be repeated to a maximum of six credits.

ENG 725 **3 credits**
Studies in Shakespeare

Intensive study of selected works of Shakespeare, with emphasis on genre, theme, or chronological grouping. May be repeated to a maximum of nine credits.

ENG 728 **3 credits**
Studies in Milton

Study of the major works of John Milton in relation to their Renaissance literary and cultural context. Prerequisite: Graduate standing or consent of instructor.

ENG 729 **3 credits**
Forms of Fiction or Poetry

Close reading and literary analysis. Topics and reading lists vary from semester to semester. May be repeated to a maximum of nine credits.

ENG 731 **3 credits**
Studies in Restoration and Eighteenth-Century British Literature

Intensive study of selected literary topics in Restoration and eighteenth-century British literature. May be repeated to a maximum of six credits.

ENG 734 **3 credits**
Studies in English Romanticism

Intensive study of selected literary topics in the English romantic period.

ENG 735 **3 credits**
Studies in Victorian Literature

Intensive examination of selected topics in Victorian literature. May be repeated to a maximum of six credits.

ENG 738 **3 credits**
Studies in Modern British Literature

Modern literature studies with emphasis upon movements which center in Great Britain. May be repeated to a maximum of six credits.

ENG 739 **3 credits**
M.F.A. Translation

Open only to students in the M.F.A. Program who have passed the qualifying oral examination. Students translate a short story, group of poems, or other work by a foreign writer. FOL 717 may substitute for ENG 739. Prerequisite: Successful completion of the oral qualifying exam.

ENG 742 **3 credits**
Studies in Early American Literature

Intensive study of selected subjects in colonial or romantic American literature, such as the work of a few important literary figures, a group of related writers, or a literary movement. May be repeated to a maximum of six credits.

ENG 743 **3 credits**
Studies in Later American Literature

Intensive study of selected topics in late nineteenth- and early twentieth-century literature. May be repeated to a maximum of six credits.

ENG 744 **3 credits**
Studies in Modern American Literature

Intensive study of selected topics in contemporary literature. May be repeated to a maximum of six credits.

ENG 749 **3 credits**
M.F.A. Critical Essay

M.F.A. students' individual investigation of an American or foreign novelist or poet using various critical methodologies. Prerequisite: Acceptance to the M.F.A. Program.

ENG 760 **3 credits**
Studies in Literary Genres

Intensive study of a literary genre, with particular attention to its history and development. May be repeated to a maximum of nine credits.

ENG 775 **3 credits**
Studies in Literary Criticism

Intensive study of selected major critical theories or a selected problem in the philosophy of criticism. May be repeated to a maximum of six credits.

ENG 787 **3 credits**
Studies in Modern Comparative Literature

Modern literature studies with the emphasis upon international movements. May be repeated to a maximum of six credits.

ENG 790 **3-12 credits**
Creative Dissertation

Open only to students in the M.F.A. program who have passed the qualifying oral examination. Students write a book-length manuscript of fiction or poetry. S/F grading only. Prerequisites: Successful completion of the oral qualifying exam. May be repeated but only a maximum of 12 credits may be applied to the student's degree program.

ENG 791 **3 credits**
College Teaching in Language and Literature

Theory and practice in the teaching of English in college, particularly the first-year course. Required of all graduate assistants.

ENG 792 **3 credits**
Directed Studies in Language

Individual investigation of a language problem in Old, Middle, or Modern English including contributions of other languages using the various methodologies of descriptive linguistics. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

ENG 794 **3-6 credits**
Independent Study - International Focus

Studies foreign cultures and languages in a non-English speaking setting. M.F.A. requirement which may be taken in lieu of registration in a foreign university. Prerequisite: Acceptance to the M.F.A. program. May be repeated to a maximum of six credits.

ENG 795 **3 credits**
Seminar

Topics vary from semester to semester. May be repeated to a maximum of nine credits.

ENG 796 **1-3 credits**
Independent Study

Open to students only upon approval of a written prospectus of the work to be done. Normally limited to three credits on the M.A. program of study.

ENG 797 **3-6 credits**
Thesis

May be repeated but only six credits will be applied toward the student's program. S/F grading only.

ENG 798 **1-3 credits**
Doctoral Research

Independent study for graduate students in the Ph.D. program upon approval by the dissertation advisor of a written prospectus of the work to be done. Normally limited to six credits on the doctoral program of study. May be repeated to a maximum of nine credits. Prerequisites: Admission to Ph.D. program and consent of graduate director.

ENG 799 **3-9 credits**
Dissertation

Open only to Ph.D. students who have passed the qualifying examination. May be repeated but only a maximum of 20 credits may be applied towards degree. Prerequisite: Consent of graduate director.

The following undergraduate courses, when taught by a member of the graduate faculty, may be used toward graduate degrees with the permission of advisor (maximum: six credits). Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

ENG 601A Advanced Composition
ENG 602A Creative Writing II
ENG 605B Research and Editing
ENG 605C Writing For Publication
ENG 607B Fundamentals of Technical Writing
ENG 608A Tutorial Techniques in English
ENG 611A Advanced Linguistics
ENG 611B Principles of Modern Grammar
ENG 612C Seminar in Language and Cognition
ENG 614 Development of American English
ENG 614A History of the English Language
ENG 614B Old English I
ENG 614C Old English II
ENG 616A Special Problems in English
ENG 616C Special Problems in English
ENG 620A Survey of Literary Criticism
ENG 626A Religion and Literature
ENG 626B Mythology
ENG 627B Gender and Literature

ENG 629A Early American Humor
ENG 629B Modern American Humor
ENG 629C Literature of the American West
ENG 630A Major Figures in British Literature
ENG 632A Chaucer
ENG 634A Shakespeare: Tragedies
ENG 634B Shakespeare: Comedies and Histories
ENG 635A Milton
ENG 636A Major Figures in American Literature
ENG 640A Medieval English Literature
ENG 640B Gender and Early Literature
ENG 641A The Renaissance
ENG 641B Gender and Renaissance Literature
ENG 642A The Seventeenth Century
ENG 643A Restoration and Augustan Literature
ENG 643C Later Eighteenth Century
ENG 644B The Romantic Poets
ENG 645B Victorian Poetry
ENG 645C Nineteenth-Century Prose Writers
ENG 646A Modern British Literature
ENG 646B Gender and Modern British Literature
ENG 652A American Literature, 1620-1800
ENG 652B American Literature, 1800-1865
ENG 653A American Literature, 1865-1918
ENG 653B American Literature, 1918-Present
ENG 654B Gender and Modern American Literature
ENG 660A Heroic Epic
ENG 661A The Study of Poetry and Poetics
ENG 662A Modern British Poetry
ENG 662C Modern American Poetry
ENG 663A Classical Drama in Translation
ENG 664A English Drama from Beginning to 1642
ENG 664B Restoration and Eighteenth-Century Drama
ENG 666A Early Modern Drama
ENG 667A Modern British Drama
ENG 667B Modern American Drama
ENG 670A The British Novel I
ENG 670B The British Novel II
ENG 671A Modern English Novel
ENG 671B Contemporary English Novel
ENG 673A The Early American Novel
ENG 673B The Modern American Novel
ENG 673C The Contemporary American Novel
ENG 674A The American Short Story
ENG 677 Study of Literary Themes
ENG 678A Folklore and Literature
ENG 678B American Folklore
ENG 678C Special Topics in Folklore
ENG 685A Asian Literature
ENG 685B Environmental Literature
ENG 691B The Bible as Literature
ENG 694A Native American Literature
ENG 695A Early African-American Literature
ENG 695B Modern African-American Literature

Foreign Languages

Chair

Harp, Margaret R. (1989), Associate Professor; B.A., Newcomb College; M.A., Ph.D., Tulane University.

Graduate Coordinator

Bellver, Catherine G. (1972), Distinguished Professor; B.A., Northwestern University; M.A., Ph.D., University of California, Berkeley.

Graduate Faculty

Artega, Deborah L. (1992), Associate Professor; B.A., Wichita State University; M.A., University of Colorado, Boulder; Ph.D., University of Washington.

Buechler, Ralph (1989), Associate Professor; B.A., Washington University; M.A., M.A.S., University of Illinois; Ph.D., University of Wisconsin, Madison.

Galindo, Jorge (1997), Assistant Professor; Licenciatura, Letras Españolas Instituto Tecnológico de Monterrey; M.A., New Mexico State University; Ph.D., University of Kansas.

Grynberg, Marek F. (2002), Assistant Professor; Ph.D., University of California, Berkeley.

Liro, Julie (2002), Assistant Professor; Ph.D., University of Arizona.

Natale, Giuseppe (2000), Assistant Professor; Laurea in Lettere, Università di Torino; M.A., Ph.D., University of Washington.

Rico, Alicia (2001), Assistant Professor; B.A., Universidad de Alicante, Spain; M.A., Ph.D. University of Kansas.

Takemaru, Naoko (2003), Assistant Professor; M.A., Michigan State; M.A., Monterey Institute of International Studies; Ph.D., Claremont Graduate University.

Villanueva, Daniel C. (1999), Assistant Professor; B.A., American University; M.A., Ph.D., Duke University;

Zhuang, Guo-ou (2001), Assistant Professor, B.A., M.A., Nanjing University, China; Ph.D., University of Southern California.

Professors Emeriti

Koester, Rudolf (1969-2000), Emeritus Professor; B.A., M.A., University of California, Los Angeles; Ph.D., Harvard University.

Schmiedel, Donald (1965-1999), Emeritus Associate Professor; B.A., Kent State University; M.A., Ph.D., University of Southern California.

The focus on language, technology, and culture in the Spanish M.A. program offers a variety of study options in order to meet the growing demand for students who seek to acquire not only a humanistic preparation in a second language but also the necessary tools for an important practical application of a second language to their future careers. These could include areas such as public and private school teaching, communications, business, law, medicine, or further graduate studies at another institution of higher learning. Enrollment in small seminars allows students to interact easily with peers and create productive mentor relationships with the faculty.

Master of Arts

Admission Requirements

Candidates for admission to the graduate program in foreign languages should have the equivalent of the UNLV undergraduate major in the corresponding language with a minimum grade point average of 3.00 in the major field. In some cases, a student who has a bachelor's degree in another discipline could be admitted to the program upon the recommendation of the department graduate advisor. Possible transfer credit will be determined by the graduate coordinator in accordance with the policies of the Graduate College.

To apply for admission, submit to the Graduate College an application and official transcripts of all college-level work. Two letters of recommendation, a statement of goals, and official transcripts of all college-level work should be sent directly to the department. Candidates are encouraged to take the GRE in the language of their proposed study.

Advising Procedures

See section on Academic Policies, "The Advisor."

Degree Requirements

French

The Department of Foreign Languages is not currently accepting students into the M.A. program in French Studies. Contact the department for further information.

Spanish

Master of Arts in Hispanic Studies

The M.A. program in Spanish is flexible, allowing students to concentrate on culture, language, literature, translation, and technology. The program aims at meeting the needs of students interested in teaching and the professions.

Before acceptance into the program, students will take a pre-qualifying examination administered by the department that will test their Spanish language skills. Students must pass this examination before being officially admitted to the M. A. program. The exam may be retaken once.

The 33-hour program includes 12 hours of required graduate course work in Spanish encompassing four areas: Current Issues in Second Language Acquisition (FOL 714), Textual Analysis (SPAN 720), Writing Workshop (SPAN 709), and Technology-Enhanced Foreign Language Education (SPAN 760). These courses must be taken in the department. A variety of courses in language, linguistics, literature, culture, and technology will be offered to allow students to complete an additional 15 hours of instruction. Nine of these hours may focus on a concentration that may be taken, upon departmental approval, outside the Spanish program. Examples of concentrations include Translation, Latin American Studies, Women's Studies, Linguistics, and French Language and Literature. A minimum of 18 credit hours must be completed at the 700 level. Students choosing the written examination option must include SPAN 798 in their program, while those following the project option must take six credits of SPAN 797. Courses taken for graduate

credit may be not be repeated, with the exception of SPAN 730 and SPAN 740, provided that topics change. Graduate courses may not be audited without consent of instructor. A grade below a B- will place a student on probation. A second grade below a B- will cause a student to be separated from the program.

Final Examination

Students may choose one of two options:

1. Written Examination Option

Under this option students will take a written Masters examination. After completing twenty-one credits, students, in consultation with the graduate coordinator, will choose for their examination three of the following areas of concentration: culture, linguistics, literature, technology in the classroom, and translation theory. Once these areas are chosen they may not be changed. The exam will be based on the courses taken as well as on a supplementary list of readings for each area available in the department. The exam will include three ninety-minute sections. Grammatical accuracy will also be a graded component of the exam. After passing all three parts of the exam, students will take an oral examination covering these chosen areas. Students who do not pass any part(s) of the exam will be allowed to retake the failed part(s) only once. Students who do not pass all three parts will be separated from the program.

2. Final Project Option

Upon the approval of the Spanish graduate faculty, students will be allowed to complete their program of studies with a final written project based on an internship, study abroad, or original research for six hours of credit. Before initiating the project, students will establish a three-member faculty examination committee for approval of the project proposal. When the program of studies is completed, students will take the Final Examination, an oral examination covering the final project. The committee shall consist of the project director, two other members of the graduate faculty, and the graduate faculty representative, who is chosen by the Graduate Dean.

Graduate Certificate in Spanish Translation

Admission Requirements

Applicants to the program must hold a B.A., with a GPA of 3.00 in their major field. Moreover, they must demonstrate an advanced level of proficiency in both English and Spanish; nonnative speakers of those languages must take a placement exam administered by the Department of Foreign Languages (Spanish) or the English Language Center (English). Applicants must be accepted by the Graduate College.

Program Description

The postbaccalaureate certificate program provides professional training in translation for both native English speakers with advanced knowledge of Spanish and native

Spanish speakers with advanced knowledge of English. Translation and interpretation competence requires a near-perfect understanding of the subtleties and nuances of meaning in one language, culture, and context for conveying the same meaning in a different language. It requires superior command of the full range of registers not only in a first language, but in one or more other languages as well.

The interdisciplinary nature of translation combines theoretical and applied course work in the departments of Foreign Languages and English. Students will be exposed to translation history and ideology, structuralist-based theories, descriptive translation studies, sociolinguistics, and semiotics for translation. On the practical side, students will work with the intellectual and technical tools required by the profession today: free-lance and in-house practice, print translations, translation of multimedia texts, localization, PC-based machine-aided translation software, and interpretation techniques.

Certificate Requirements

The program consists of the following 18 credits, generally taken in sequence:

*SPAN 709	Writing Workshop in Spanish
ENG 604	Fundamentals of Technical Writing
FOL 715	Theory of Translation
SPAN 770	Spanish Translation <i>or</i>
FOL 716	Translation Workshop
SPAN 713	Spanish Sociolinguistics <i>or</i>
SPAN 693	Spanish in the Americas <i>or</i>
SPAN *717	Seminar in Spanish Linguistics
SPAN 780	Spanish Interpretation <i>or</i>
FOL 717	Independent Study in Translation

Assessment of Certificate Requirements

The objectives of the Certificate in Spanish Translation is to ensure that the student is able to produce an accurate interpretation of what is said or written in the source language and to deliver an accurate rendition in the target language. The final assessment will take into account three different components - linguistic, technical, and cultural – and each component will be equally weighted. For the duration of the certificate program, each student will build an Assessment Portfolio.

The Assessment Portfolio will comprise all relevant courses taken at UNLV or at another institution, language tests in the source language and target language, translation projects completed within the UNLV program or specific training in interpretation. The Assessment Portfolio will perform a diagnostic function, allowing the instructor(s) to assess strengths and weakness of the student. The portfolio will be used to provide constructive feedback to those students who have weak areas and need additional work before they can successfully complete the program.

Once the student has met all required conditions for the certificate – number of credits, core courses, and language proficiency – he or she will be required to take an exit exam. The exam will duplicate as closely as possible the conditions in which translators and interpreters work in the professional world. The exit exam will be performed under specific time constraints, appropriate to the task. Students will choose

which of the two exit exams (translation or interpretation) they will sit for, based on their individual preparation and experience. Once the exit examination is selected, it may not be changed. Each candidate will be able to utilize the necessary tools typical for these situations (dictionaries, PC, CD-ROMS etc.). A minimum of 80 percent must be achieved in this test to be awarded the Translation Certificate. Failing students can repeat the exam until a sufficient score is attained. The criteria used at the final exam for interpreters and translators vary, as the two disciplines require partly different skills:

Assessment for Interpreters: includes language quality, appropriate cultural decoding, grammar, pronunciation, timing, register, style, accuracy, and general effectiveness.

Assessment for Translators: includes language quality, appropriate cultural decoding, grammar, spelling, punctuation, recognition of textual levels, style, and general effectiveness.

Program Completion Requirements

Students must complete all course work within three years of admission and maintain a GPA of 3.0 in all course work completed. Students are strongly encouraged to complete the program within three semesters, given the rotation of courses.

Foreign Languages

FOL 714 **3 credits**
Current Issues in Second Language Acquisition
 Investigates current issues in theoretical studies of second language acquisition, and a comparison of L1/L2 acquisition in light of recent developments in linguistic theory and empirical studies. Provides overview of major subdisciplines, issues and approaches.

FOL 715 **3 credits**
Theory of Translation
 Readings in the theory of translation, as well as textual analysis of existing translations to and from several different languages. Taught in English. Prerequisites: Graduate student with advanced knowledge of one foreign language, consent of instructor.

FOL 716 **3 credits**
Workshop in Translation
 Explores problems inherent in the translation of foreign texts, works on individual and common projects with assistance of instructor. May be repeated to a maximum of six credits. Prerequisites: Graduate student with advanced knowledge of one foreign language, FOL 715, consent of instructor.

FOL 717 **3 credits**
Independent Studies in Translation
 Opportunity to pursue an individualized course or project in translation studies. May be repeated to a maximum of six credits. Prerequisites: Graduate student with advanced knowledge of one foreign language, FOL 715, FOL 716, consent of instructor.

French

FRE 701 **3 credits**
Methods of Literary Research and the Writing of Essays
 Bibliography and documentation including the techniques of the dissertation française (three-part essay).

FRE 702 **3 credits**
French Literary Criticism
 History of literary criticism from the Renaissance to the present. Theories and techniques of twentieth-century literary criticism emphasized.

FRE 703 **1-3 credits**
Guided Reading and Research
 May be repeated for up to six credits.

FRE 704 **3 credits**
Selected Topics in French Literature
 Study of a particular literary theme or individual writer as chosen by the professor. Topics vary. May be repeated for credit.

FRE 722 **3 credits**
The Courtly Romance
 Studies origins and variations of French courtly romance. Close analysis of prevalent themes and stylistic found in works of Marie de France, Chretien de Troyes, and Guillaume de Lorris. Prerequisites: Graduate standing or consent of instructor.

FRE 741 **3 credits**
The Development of the French Novel
 Evolution of the novel as a genre, from Chretien de Troyes to contemporary writers. Taught in French.

FRE 742 **3 credits**
The Evolution of French Theater
 Study of the development of the dramatic arts in France. Taught in French.

FRE 743 **3 credits**
The Evolution of French Poetry
 Evolution of poetry, from the troubadours to contemporary French poets. Taught in French.

FRE 755 **3 credits**
Studies in Francophone Culture
 Presentation of French speaking cultures outside metropolitan France. May be repeated for up to six credits. Taught in French.

FRE 792 **3 credits**
Studies in Francophone Literature
 Study of principal works in Francophone literature. May be repeated for up to six credits. Taught in French.

FRE 797 **3-6 credits**
Thesis

Spanish

SPAN 703 **1-3 credits**
Guided Reading and Research
May be repeated to a maximum of six credits.

SPAN 708 **3 credits**
Teaching Literature in Language Classes
Investigation of concerns related to integration of short stories into Spanish language skill classes. Variety of pedagogical resources and techniques explored. Students acquire a collection of teaching ideas, materials and strategies. Taught in Spanish.

SPAN 709 **3 credits**
Writing Workshop
Enhance students' writing skills in Spanish. Some grammar issues reviewed. Analyzes writing techniques for different texts such as reports, summaries, reviews and analytical papers. Student apply these techniques to their own assignments. Taught in Spanish. Prerequisite: Successful completion of departmental Spanish language exam.

SPAN 710 **3 credits**
Studies in the Spanish Language
Current approaches to topics related to the Spanish language. May be repeated with different topics to a maximum of six credits. Taught in Spanish. Prerequisites: SPAN 717 or consent of instructor.

SPAN 713 **3 credits**
Spanish Sociolinguistics
Overview of the varied manifestations of the Spanish language. Topics include regional variation, social variation, code-switching, and bilingualism. Taught in Spanish. Prerequisites: SPAN 717 or consent of instructor.

SPAN 716 **3 credits**
Romance Linguistics
Linguistic development of Latin into the different Romance languages and dialects, with background of social and cultural history of the Romance-speaking area.

SPAN 717 **3 credits**
Seminar in Spanish Linguistics
Introduction to structure of the Spanish language within framework of theoretical linguistics. Topics covered include analysis of Spanish sound system, word formation processes, and sentence structure. Taught in Spanish.

SPAN 720 **3 credits**
Textual Analysis
Introduction to textual criticism, based on broad concept of text used by current theoretical trends. Theoretical approaches include Russian Formalism to Postmodernism and application to different text such as film, architecture, comics, commercial ads, TV programs, fashion and literary texts. Taught in Spanish.

SPAN 730 **3 credits**
Studies in Hispanic Culture
Study of aspects of culture reflected in works of scholars, writers, artists, and the mass media. May be repeated with different topics for a maximum of six credits. Taught in Spanish.

SPAN 740 **3 credits**
Studies in Hispanic Literature
Covers selected works in Hispanic literature which reflect prominent cultural trends. Texts studied may represent historical periods, a literary genre, or a single important author. Variety of critical perspectives and overview of the sociopolitical environment incorporated. May be repeated with different topics. Taught in Spanish.

SPAN 760 **3 credits**
Current Applications of Technology in Foreign Languages
In-depth knowledge of recent trends in foreign language technologies. In addition, students develop advanced proficiency level in the design of electronic teaching materials for the foreign language classroom. Taught in Spanish.

SPAN 770 **3 credits**
Studies in Translation
Offers access to wide range of topics in Spanish-English translation. Focuses on a specific area, such as the translation of cultural difference or the formal problems involved in the translation of poetry. May be repeated a maximum of six credits. Taught in Spanish. Prerequisites: SPAN 709 and ENG 602 or ENG 603.

SPAN 780 **3 credits**
Studies in Interpretation
Offers access to wide range of topics in Spanish-English interpretation. Focuses on a specific area, such as advanced medical, legal or conference interpretation. May be repeated to a maximum of six credits. Taught in Spanish. Prerequisites: SPAN 709 and ENG 602 or ENG 603.

SPAN 796 **3 credits**
Independent Study
Individual reading projects under direction of a faculty member. Department approval must be obtained prior to registration. May be repeated to a maximum of six credits. Prerequisite: Department approval prior to registration.

SPAN 797 **3 credits**
M.A. Written Project
Development and undertaking of a capstone project in the M.A. program. Approval from student's M.A. committee must be obtained prior to registration. May be repeated to a maximum of six credits. Prerequisite: Approval from student's M.A. committee.

SPAN 798**3 credits****M. A. Written Examination**

Preparation for the written examination, including the supplementary reading lists. Generally taken in the same semester as written M. A. exam. Grade will be pass/fail based on the results of the examination. May not be repeated for credit. Prerequisite: Consent of graduate coordinator.

Graduate credit (12 credits maximum) may be obtained for courses designated 650 or above when taught by graduate faculty. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600-level requires additional work.

- FOL 614 Romance Linguistics
- FOL 699 Application of Linguistics to the Teaching of Languages
- FRE 621 Literature of the Middle Ages
- FRE 632 Renaissance Literature
- FRE 650 History of the French Language
- FRE 653 French Institutions and Cultural Life
- FRE 654 The Arts in France
- FRE 655 The Culture of Paris
- FRE 690 Selected Topics of French Literature
- SPAN 620 Technology-Enhanced Foreign Language Education
- SPAN 650 Advanced Topics in Hispanic Literature
- SPAN 655 Methods of Teaching Spanish Native Speakers
- SPAN 661 Spanish Golden Age Drama
- SPAN 662 The Works of Cervantes
- SPAN 665 Spanish Romanticism and Costumbrismo
- SPAN 666 Spanish Realism
- SPAN 667 The Generation of '98
- SPAN 668 Modern and Contemporary Spanish Literature
- SPAN 671 Modernism
- SPAN 672 Spanish-American Novel
- SPAN 673 Spanish-American Short Story
- SPAN 690 Selected Topics
- SPAN 693 Spanish in the Americas

History

Chair

Moehring, Eugene P. (1976), Professor; B.A., M.A., Queens College; Ph.D., City University of New York.

Graduate Coordinator

Nelson, Elizabeth White (1996), Associate Professor; A.B., Bryn Mawr College, M.A., Ph.D., Yale University.

Graduate Faculty

- Bell, Andrew J. E. (1994), Associate Professor; B.A., Oxford University; Ph.D., Stanford University.
- Brown, Gregory (1998), Associate Professor; B.A., University of Pennsylvania; M.A., Ph.D., Columbia University.
- Casas, Maria Raquel (1997), Associate Professor; B.A., California State University at Fresno; M.A., Ph.D., Yale University.
- Chung, Sue Fawn (1975), Associate Professor; B.A., University of California, Los Angeles; M.A., Harvard University; Ph.D., University of California, Berkeley.
- Coughtry, Jay A. (1982), Associate Professor; B.A., State University of New York, Geneseo; M.A., Ph.D., University of Wisconsin.
- Fraterrigo, Elizabeth (2004), Assistant Professor; B.A., University of Illinois; M.A., Ph.D., Loyola University, Chicago.
- Fry, Joseph A. (1975), Distinguished Professor; B.A., Davis and Elkins College; M.A., Ph.D., University of Virginia.
- Goodwin, Joanne (1991), Associate Professor; B.F.A., University of Washington; M.A., Sarah Lawrence College; Ph.D., University of Michigan.
- Holland, David (2005), Assistant Professor; B.A., Brigham Young University; M.A., Ph.D., Stanford University.
- Kirk, Andrew Glenn (1999), Associate Professor; B.A., M.A., University of Colorado-Denver; Ph.D., University of New Mexico.
- Loader, Colin T. (1986), Professor; A.B., Bates College; M.A., University of Rhode Island; Ph.D., University of California, Los Angeles.
- Rollings, Willard H. (1989), Professor; B.A., M.A., New Mexico State University; Ph.D., Texas Tech University.
- Rothman, Hal K. (1992), Professor; B.A., University of Illinois; M.A., Ph.D., University of Texas at Austin.
- Tanenhaus, David (1997), Associate Professor; B.A., Grinnell College; M.A., Ph.D., University of Chicago.
- Tusan, Michelle (2001), Assistant Professor; B.A., University of California, Davis; M.A., Ph.D., University of California, Berkeley.
- Wallace, Barbara (1998), Assistant Professor; B.A., M.A., University of California, Riverside; Ph.D., University of California, Los Angeles.
- Ward, Janet (2002), Associate Professor; B.A., University of London; M.A., University of Pennsylvania; Ph.D., University of Virginia.
- Werth, Paul (1997), Associate Professor; B.A., Knox College; Ph.D., University of Michigan.
- Whitney, Elspeth (1990), Associate Professor B.A., San Francisco State University; Ph.D., City University of New York.
- Wright, Thomas C. (1972), Professor; B.A., Pomona College; M.A., Ph.D., University of California, Berkeley.
- Wrobel, David (1999), Professor; B.A., University of Kent; M.A., Ph.D., Ohio University.

Professors Emeriti

Burns, Paul E. (1963-1995), Emeritus Professor; B.A., Miami University (Ohio); M.A., Certificate in Russian Studies, Ph.D., Indiana University.
Davenport, Robert W. (1964-1998), Emeritus Associate Professor; B.A., Pomona College; M.A., University of California, Berkeley; M.S., Ph.D., University of California, Los Angeles.
Finocchiaro, Maurice A. (1968), Distinguished Professor; B.S., Massachusetts Institute of Technology; Ph.D., University of California, Berkeley.
Mattson, Vernon E. (1969), Associate Professor; B.A., Tennessee Temple College; M.A., North Texas State University; Ph.D., University of Kansas.

The graduate programs in history are designed to achieve a balance between teaching and research. Advanced study in the areas of European, American, Latin American, Asian, and Public History has prepared many of our graduates for teaching positions in area schools and community colleges. Our course offerings, which train students in methodology, writing, editing, and critical analysis, as well as other skills, have qualified many of our graduates for admission to doctoral programs, law schools, government positions, and jobs in historical societies, museums, and international business firms.

Master of Arts

The Department of History offers a Master of Arts degree with concentrations in the following areas: United States, Europe, Asia, Latin America, and Public History (minor). The program is designed to broaden and deepen the student's understanding of the heritage of human experience. It also sharpens scholarly skills and provides for some specialization in specific fields or periods of history.

Admission Requirements

Students must meet the following requirements for admission to graduate standing.

1. An overall undergraduate grade point average of at least 3.00.
2. A grade point average of at least 3.30 in history courses.
3. Recommendations from two former instructors addressing the applicant's preparedness for graduate work in history.
4. A minimum of 18 credits in history.
5. Submission of a writing sample, preferably a research paper, representative of undergraduate work.
6. Submission of a statement of purpose in which the applicant describes historical areas and approaches of particular interest, background and training for advanced work in history, and academic and professional goals.

Degree Requirements

There are two plans for the master's degree in history. Each requires that a student's advisor and graduate committee approve all course work plans. A field outside of history may be presented as part of a student's program. A grade of C will not be accepted for graduate credit, but will be averaged into the student's grade point average. A

minimum GPA of 3.00 must be achieved in all graduate work attempted toward the degree. A minimum of 16 credit hours of course work must be at the 700-level. The student is required to have a reading knowledge of a foreign language if that language is necessary to do research in the selected field. The specific track requirements are as follows:

1. Thesis Plan

A minimum of thirty-one graduate credits, including six credits of thesis. In addition to the major area of study, the student must complete nine credits in a minor area. Required courses are HIST 740, four credits of seminar (HIST 725, 727, 729, 731, (the Public History minor requires an additional three credits of internship). Course requirements are: three credits of historiography (HIST 740); six credits of colloquium (724, 726, 728, 730, 732, 734, 736, or 769); and four credits of seminar (725, 727, 729, 731, 733, 735, or 737). A maximum of nine credits at the 600-level can count toward degree requirements. Students must successfully complete a written examination in the major area of history. This may be taken at the completion of twenty-one credits of course work, and must be taken no later than the completion of twenty-five credits. In addition, an oral defense of the thesis will be required.

2. Non-Thesis Plan

A minimum of thirty-four graduate credits. In addition to a minimum of twenty five credits in the major area of study, students must complete nine credits in a minor area (the Public History minor requires an additional three credits of internship). Course requirements are: three credits of historiography (HIST 740); six credits of colloquium (724, 726, 728, 730, 732, 734, 736, or 769); and four credits of seminar (725, 727, 729, 731, 733, 735, or 737). Students must also successfully complete a written examination in the major and minor areas of study. This may be taken at the completion of twenty-four credits, and must be taken no later than the completion of thirty-four credits.

Doctor of Philosophy

The degree of Doctor of Philosophy is the ultimate expression of the History Department's mission to generate and disseminate new knowledge of the past through research, reflection and publication. The doctoral program in history at UNLV has two tracks: the history of the American West and the cultural/intellectual history of the United States and Europe. The degree aims at providing graduates with the capacity for original research and thought as demonstrated by the completion of a doctoral dissertation of substantial length combining imagination and excellence.

Admission Requirements

1. B.A. or equivalent from an accredited institution with a minimum GPA of 3.00, with at least a 3.30 in history courses, or an M.A. or equivalent from an accredited institution with a minimum GPA of 3.50. Applicants must have completed significant course work at the upper-division or graduate level in either American

- history (and preferably the American West) or the (cultural/intellectual) history of Europe or the United States.
2. Competitive scores on verbal, quantitative and analytical measures of the Graduate Record Examination.
 3. Recommendations from three former instructors addressing the applicant's preparedness for doctoral level work in the History of the American West or either the cultural/intellectual history of Europe or the United States.
 4. A statement of purpose in which the applicant describes specific interests in and approaches to the history of the American West or the cultural/intellectual history of Europe or the United States. The statement should also include a description of the applicant's background and training for advanced work in this field as well as academic and professional goals.
 5. A writing sample in the form of a master's thesis or original research paper of substantial length and quality. If possible, the writing sample should engage either the history of the American West or the cultural/intellectual history of Europe or the United States.

Degree Requirements

A minimum of 56 credits beyond the B.A. or 38 credits beyond the M.A. in History or closely related disciplines. In either case, credits must be distributed as follows:

- 1a. *American West Track*: Doctoral students in the American West track must complete: nine credits of colloquium (HIST 724, 726, 728, 730, 732, or 769), three credits of which must be in the non-U.S. field; eight credits of seminar (725, 727, 729, 731, or 733); nine credits of historiography (including 740f: American West, and 740g: United States Cultural/Intellectual or 740h: European Cultural/Intellectual); and twelve credits of work in an appropriate academic discipline/s other than history, and/or in a non-US field of history.
- 1b. *Cultural/Intellectual Track*: Doctoral students in the Cultural/Intellectual History track must complete: nine credits of colloquium (HIST 724, 726, 728, 730, 732, or 769); eight credits of seminar (725, 727, 729, 731, or 733); and nine credits of historiography (including 740g and 740h). Students must take twelve further credits in fields of inquiry outside of their major field of Europe or the United States. In consultation with their advisor, students may take six credits of work at either the 600- or 700-level in one appropriate academic discipline other than history. Students must take a minimum of six credits in the minor field, of which at least three should be colloquium (where possible).
2. Satisfaction of the foreign language requirement. This requirement can be met in any of the following three ways, though the chosen option must be approved by the chair of the student's examination committee:
 - i. Demonstrated reading knowledge of two foreign languages.

- ii. Demonstrated reading knowledge of one foreign language and the successful completion of SOC 604.
- iii. Demonstrated reading knowledge of one foreign language and advanced reading knowledge of the same language, assessed through the writing of a substantial historiographical essay in English based on scholarly literature in that foreign language.
3. Satisfactory performance on written and oral qualifying examinations.
 - 3a. *American West Track*:
Students in the American West track take exams in four required fields: I) Major Field: American West. II) Topical Field in U.S. History other than the American West. III) Theory and Methods in American Western History. IV) Regional Field outside U.S. History, or Public History (oral exam only). Students write on a total of five of ten essay questions.
 - 3b. *Cultural/Intellectual Track*:
Students in the Cultural/Intellectual track take exams in four required fields: I) Major Field: Cultural and/or Intellectual History of the major geographic area of specialization (Europe or United States). II) Topical Field within the history of the major geographic area of specialization (Europe or United States). III) Theory and Methods in Cultural/Intellectual History. IV) Topical Minor Field in the history of a geographic area other than the geographic area of specialization, or Public History (oral exam only). Students write on a total of five of ten essay questions.
4. A dissertation of substantial length and quality containing original research and interpretation on a topic in the field of either U.S. Western History or European or American Cultural and/or Intellectual History. The student must take a minimum of twelve dissertation credits.
5. An oral defense of the dissertation.
6. A total of at least 68 credits beyond the B.A. or at least 50 credits beyond the M.A.

History

HIST 724 3 credits Colloquium in American Cultural/Intellectual History

Specific topic or theme announced each semester and related bibliography provided. Group sessions critique this literature and evaluate historiographical status of authors. Several short papers, designed to give training in critical analysis, required. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 725 4 credits Seminar in American Cultural/Intellectual History

Topic to be announced each semester. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 726 **3 credits**

Colloquium in American Western History

Specific topic or theme announced each semester and related bibliography provided. Group sessions critique literature and evaluate the historiographical status of authors. Several short papers, designed to give training in critical analysis, required. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 727 **4 credits**

Research Seminar in American Western History

Topic to be announced each semester. May be repeated to a maximum of 12 credits. Prerequisite: Graduate standing.

HIST 728 **3 credits**

Colloquium in European Cultural/Intellectual History

Analysis of the historical literature on a selected topic in European intellectual/cultural history. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 729 **4 credits**

Research Seminar in European Cultural/Intellectual History

Topic to be announced each semester. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 730 **3 credits**

Colloquium in American History

Specific topic or theme to be announced and related bibliography provided. Course focuses on critical analysis and historiographical evaluation of the literature. a) Early America. b) Nineteenth Century. c) Twentieth Century. d) Diplomatic. e) Economic. f) Gender. h) Legal. i) Political j) Race. k) Religion l) Social. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 731 **4 credits**

Research Seminar in American History

Topic to be announced each semester. a) Early America. b) Nineteenth Century. c) Twentieth Century. d) Diplomatic. e) Economic. f) Gender. h) Legal. i) Political. j) Race. k) Religion. l) Social. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 732 **3 credits**

Colloquium in European History

Analysis of the historical literature on a selected topic in European history. a) England. b) The French Revolution and Napoleon. c) Modern Russia. d) Germany. e) Medieval History. f) Europe since 1945. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 733 **4 credits**

Research Seminar in European History

Topic to be announced each semester. a) England. b) The French Revolution and Napoleon. c) Modern Russia. d) Germany. e) Medieval. f) Europe since 1945. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 734 **3 credits**

Colloquium in Modern Asian History

Analysis of the historical literature on a selected topic in modern Asia. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 735 **4 credits**

Research Seminar in Modern Asian History

Topic to be announced. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 736 **3 credits**

Colloquium in Modern Latin American History

Analysis of the historical literature on a selected topic in modern Latin America. Topics to be announced. May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 737 **4 credits**

Research Seminar in Modern Latin American History

Topics to be announced. May be repeated to a maximum of twelve credits. Prerequisite: Graduate standing.

HIST 740 **3 credits**

Historiography

Lectures, readings, and discussions on the history of historical thought. a) United States-Domestic. b) Europe. c) Modern Asia. d) Modern Latin America. e) United States-Diplomatic. f) American West. g) United States (cultural/intellectual). h) European (cultural/intellectual). May be repeated to a maximum of nine credits. Prerequisite: Graduate standing.

HIST 748 **3 credits**

History and Policy

Interdisciplinary historical analysis of American policy formation and failed versus workable policy ideas. Areas of investigation include policy studies in fields such as labor, urban development, minorities and diplomacy. Prerequisite: Graduate standing.

HIST 749 **3 credits**

Colloquium in Public History

(Formerly HIS 753.) Practical as well as theoretical introduction to the techniques, methodologies and practices of historians in non-academic settings, including historic preservation, museums, oral history, historical sites, government agencies. Prerequisite: Graduate standing.

HIST 750 **3 credits**

Methods for the Study of Public History

Study of methods emphasizing those historical techniques and auxiliary sciences which are most appropriate for the study of public history. Prerequisite: Graduate standing.

HIST 751 **3 credits**

Museums and American Culture

Theoretical and practical introduction to issues involved in history museums. Evolving role of museums in American society; organizational, ethical, and interpretive issues; the tension between power and the production of knowledge and memory. Emphasis on curatorial practice including researching and interpreting material culture. Prerequisite: Graduate standing.

HIST 752 **3 credits**

Modern Archives: Theory and Methodology

Introduction to theoretical principles, methodologies and processing of archives and manuscripts, institutional programs that care for them, and professional community supporting this work. For students interested in the practice of public history in a variety of historical agencies or organizations. Prerequisite: Graduate standing.

HIST 754 **3 credits**

Topics in Public History

Practical and theoretical course exploring the varieties of public history. Prerequisite: Graduate standing.

HIST 760 **1-3 credits**

Advanced Studies in History

May be repeated to a maximum of six credits, unless otherwise approved by the department. Prerequisite: Graduate standing.

HIST 761 **1-3 credits**

Doctoral Independent Study

Supervised readings on special topics selected in consultation with a history instructor. May be repeated to a maximum of nine credits, unless otherwise approved by the department. Prerequisite: Graduate standing.

HIST 790 **3-6 credits**

Thesis

May be repeated, but only six credits applied to the student's program. S/F grading only. Prerequisite: Graduate standing.

HIST 791 **3-6 credits**

Dissertation

(Formerly HIS 780.) May be repeated, but only 12 credits applied to the student's program. S/F grading only. Prerequisite: Graduate standing.

HIST 795 **1-3 credits**

Internship in Public History

Supervised internship is an integral part of the Public History track. Internships provide students with practical insights into potential historical employment. Private sector or institutional supervisors provide mentoring relationships and introduce students to the professional networks common to the public historian's work environment. Prerequisite: Graduate standing.

The department also offers a large number of undergraduate courses which are open to graduate students at the 600-level. Among these are courses which reflect the specializations of our faculty. Graduate students enrolled in the following courses will ordinarily be expected to complete a special project. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

HIST 601A American Constitutional and Legal History I

HIST 601B American Constitutional and Legal History II

HIST 604A American Social History to 1860

HIST 604B American Social History, 1860-Present

HIST 605 History of the New South

HIST 606A The American West to 1849

HIST 606B The American West Since 1849

HIST 607A United States Foreign Relations I

HIST 607B United States Foreign Relations II

HIST 610 American Intellectual History

HIST 611 United States: Colonial Period

HIST 612 United States: Revolution and the New Republic

HIST 614A United States: National Period, 1815-1860

HIST 614B United States: Civil War and Reconstruction, 1860-1877

HIST 615A United States: Gilded Age, 1877-1900

HIST 615B United States: The Progressive Era, 1900-1920

HIST 616A Recent America: Era of Franklin D. Roosevelt, 1920-1945

HIST 617A Nevada and the Far West

HIST 617 Contemporary America: The U.S. Since 1945

HIST 619A Britain to 1750

HIST 619B Britain from 1750

HIST 620 Revolution in Central Europe: 1914-Present

HIST 621 History of Russia to 1825

HIST 622 History of Russia Since 1825

HIST 623A History of Germany to 1848

HIST 623B History of Germany Since 1848

HIST 624 Role of Religion in American Culture

HIST 625 History of Southern Nevada

HIST 626 The American West Through Film

HIST 628 History of Business in United States History

HIST 629 History of American Labor, 1607-Present

HIST 632A History of American Women to 1870

HIST 632B History of American Women, 1870 to Present

HIST 633 African-American History

HIST 634 Role of Cities in American History

HIST 634A European Urban History

HIST 635A Early Modern Intellectual History

HIST 635B Modern Intellectual History

HIST 636 Nazi Holocaust from the American Perspective

HIST 637 Family History

HIST 638A Ethnohistory of Native Americans to 1851

HIST 638B Ethnohistory of Native Americans Since 1851

HIST 640 History of Plains Indians

HIST 641 American Environmental History

HIST 643 Comparative Environmental History

HIST 644 Latinos in the American West

HIST 645 Cultural History of Modern Russia

HIST 646 History of the Russian Film

HIST 647 Revolutionary Russia 1905-1921

HIST 648 Asian American History
 HIST 649 History of Japan
 HIST 650 History of China
 HIST 652A Popular Culture in Nineteenth-Century America
 HIST 652B Popular Culture in Twentieth-Century America
 HIST 653 Women in Politics
 HIST 655 Topics in Modern China
 HIST 656 Topics in Ancient History
 HIST 657 Ancient Greek Civilization
 HIST 658 Roman Civilization
 HIST 659 Medieval Civilization
 HIST 660A The Renaissance
 HIST 660B The Reformation
 HIST 661 Europe in the 18th Century
 HIST 661B Early Modern Europe: 1550-1789
 HIST 662 The French Revolution and Napoleon
 HIST 663 Europe: 1815-1914
 HIST 664 Europe: 1914 to the Present
 HIST 666 European Diplomatic History, 1815-Present
 HIST 668 History of Science
 HIST 670 History of Mexico
 HIST 671 Revolution and Reaction in Contemporary Latin America
 HIST 672 History of Brazil
 HIST 673 History of the Andean Region
 HIST 674 Latin American Ethnic Studies
 HIST 675 Modern Latin American Film
 HIST 676 The Mexican Revolution
 HIST 678 Middle-Eastern Studies
 HIST 679 History of the British Empire
 HIST 682 Music History I
 HIST 683 Music History II
 HIST 685 Oral History
 HIST 686 Military History of the United States
 HIST 687 Study in History Abroad
 HIST 689 Comparative History
 HIST 698 Advanced Historical Studies
 HIST 691A Women in the Ancient World
 HIST 691B Women in Medieval Culture and Society
 HIST 692 Woman's Role in European History: 1750-1970
 HIST 692A Women In Early Modern Europe
 HIST 692B Women In Modern European History
 HIST 695 Special Topics in Gender and History
 HIST 696 Philosophy of History

Political Science

Chair

Tamadonfar, Mehran (1987), Associate Professor; B.A., M.A.,
University of Tehran; Ph.D., University of Colorado, Boulder.

Graduate Coordinator

Fott, David S. (1992), Associate Professor; B.A., Vanderbilt University;
A.M., Ph.D., Harvard University.

Graduate Faculty

Bowers, Michael (1984), Professor; B.A., Cameron University; M.A.,
Ph.D., University of Arizona.
 Damore, David (2000), Assistant Professor; B.A., University of
California-San Diego, M.A., University of Georgia; Ph.D., University
of California-Davis.
 Fernandez, Kenneth (2004), Assistant Professor; B.A., University of
California, San Diego; M.A., Ph.D., University of California,
Riverside.
 Hays, Bradley (2005), Assistant Professor; B.S., Northeastern Univer-
sity; Ph.D., University of Maryland.
 Itoh, Mayumi (1991), Professor; B.A., Yokohama City University; M.A.,
Ph.D., City University of New York.
 Jelen, Ted G. (1997), Professor; B.A., Knox College; M.A., Ph.D., Ohio
State University.
 Kuenzi, Michele (2004), Assistant Professor; B.A. Grinnell College;
M.P.A., Wayne State University; Ph.D., Michigan State University.
 Mehrtens, F. John III (2004), Assistant Professor; B.A., University of
California, Santa Barbara; M.A., University of Nebraska, Lincoln;
Ph.D., University of North Carolina, Chapel Hill.
 Parker, Steven (1979), Associate Professor; B.A., Assumption College;
M.A., Ph.D., State University of New York, Albany.
 Simich, Jerry L. (1973), Associate Professor; B.A., California State
University, Long Beach; Ph.D., University of California, Santa
Barbara.
 Strand, Jonathan (2002), Assistant Professor; B.S., University of
Wisconsin-Platteville; M.A., Ph.D., University of Nebraska, Lincoln.
 Titus, Dina (1977), Professor; B.A., College of William and Mary; M.A.,
University of Georgia; Ph.D., Florida State University.
 Tuman, John (2001), Professor; B.A., University of California,
Berkeley; M.A., University of Chicago; Ph.D., University of
California, Los Angeles.

Professors Emeriti

Bigler, Robert M. (1970-1998), Emeritus Professor; Diploma, University
of Budapest; M.A., Ph.D., University of California, Berkeley.
 Dixon, Brock (1971-1985), Emeritus Vice President; B.A., Pacific
College; M.A., University of Oregon; Ph.D., University of Southern
California.
 Jones, Gary L. (1969-2002), Emeritus Associate Professor; A.A., Long
Beach City College; B.A., Long Beach State College; Ph.D.,
Claremont Graduate School.
 Tuttle, Andrew C. (1968-2000), Emeritus Associate Professor; B.A.,
M.A., University of California, Santa Barbara; Ph.D., Claremont
Graduate School.
 Walton, Craig (1972-2004), Emeritus Professor; B.A., Pomona College;
Ph.D., Claremont Graduate School.

The Department of Political Science has responsibility for the administration of two different master's degree programs. One focuses exclusively on Political Science and the other is a graduate program in Ethics and Policy Studies. A description of each follows in a separate, numbered section.

I. Political Science

The Department of Political Science offers a general Master of Arts degree. Students tailor their programs with the assistance of the department's graduate coordinator. Programs are flexible, and students may take advantage of individualized instruction. Advisory committees will approve programs that provide an appropriate degree of specialization in one of the fields of political science with supporting studies in others.

Students can receive graduate education in the areas of comparative politics, international relations, American politics, political theory, public law, and public policy. Students can normally expect to complete the program in from one-and-a-half to two years. The department offers a number of graduate assistantships as well as internship opportunities at the local, state, and federal levels, where students can obtain on-the-job experience.

The graduate program in political science is designed to prepare graduate students for doctoral studies, teaching positions at secondary schools and community colleges, or employment by government agencies, research centers, or private industry. Our graduates have gone on to executive positions in national, state, and local governments and to doctoral programs at top schools throughout the country.

Admission Requirements

Admission to the department is competitive, with only the strongest applicants gaining admission in any given year. Applicants must submit to the department's graduate coordinator 1) transcripts of all postsecondary academic work, 2) Graduate Record Examination (GRE) General Test scores, 3) two letters of recommendation from academic referees, and 4) a one-page essay explaining why they want to enter the master's program. Application forms and fees, official transcripts, and assistantship applications are submitted directly to the Graduate College. Applicants for admission must have earned:

1. A baccalaureate from an accredited college or university.
2. A minimum of 18 credits in political science or the equivalent as determined by the department's graduate faculty.
3. A grade point average of at least 3.00 in political science and overall.
4. Satisfactory scores on the GRE General Test. Minimum scores are 500 on the verbal and quantitative sections of the exam; we also consider the analytical writing score. In unusual circumstances, students who do not meet the above criteria may still be admitted.

Degree Requirements

The candidate for the Master of Arts degree must complete a minimum of 30 credit hours under Plan A or 33 credit hours under Plan B in courses designated for graduate study in political science and related disciplines. Candidates must take course work in three fields, one of which must be American government and politics. Eighteen credits must be taken in graduate seminar work. Students may complete a maximum of 6 graduate credits in related areas outside political science. To be counted toward the M.A. degree, all courses must be pre-approved by the graduate coordinator. The candidate must maintain a minimum B average during the semester in order to remain in good standing. Only those courses in which a student receives a grade of B or better may be used for graduate credit. The candidate, in conjunction with the graduate coordinator, will select either Plan A or Plan B. All graduate students are required to take PSC 701 (Research Design and Methodology) among their first 12 credit hours. Other seminars may have prerequisite requirements; for example, PSC 721 must be taken before PSC 729. Internship credits do not count toward a degree program.

Plan A (Thesis Option)

Students selecting Plan A must complete 24 credit hours of course work in at least three fields of political science (including American politics) plus 6 credits for thesis. After completing the thesis, students take oral exams administered by a committee of three members from the department faculty, and those academic and administrative representatives as specified by Graduate College regulations.

Plan B (Non-Thesis Option)

Students opting for Plan B must complete 33 credit hours in three fields of concentration (one of which must be American politics), including PSC 782 (Directed Readings in Political Science). After completing the departmental course requirements, the candidate will take written and oral examinations under the direction of a supervising committee made up of members of the department's graduate faculty and a Graduate College representative.

Political Science

PSC 701 3 credits Seminar in Research Design and Methodology

Exposes graduate students to a body of literature and a set of ideas about doing sound social science research, either applied or non-applied. Emphasis on injecting scientific and theoretical rigor into the investigation of political phenomena. Prerequisite: Graduate standing.

PSC 702 3 credits Seminar in Advanced Quantitative Methods

Review of basic statistical techniques and in-depth treatment of bivariate and multivariate regression analysis, including regression diagnostics and remedies for assumption violations. Also introduces advanced statistical estimation techniques including robust regression, time-series analysis, and maximum likelihood estimation. Prerequisites: Graduate standing and PSC 701 or equivalent.

PSC 710 **3 credits**
Seminar in American National Government: Principles

Addresses the theoretical principles underlying — and disputed within — the American political regime since the Founding. Readings include writings by American statesmen, political philosophers, and scholars representative of key perspectives in the liberal-constitutional tradition. Satisfies U.S. Constitution requirement. Prerequisite: Graduate standing.

PSC 711 **3 credits**
Seminar in American National Government: Structure and Processes

Based on critical interpretation of classic works on the discipline. Covers American political institutions, public opinion, voting behavior, and public policymaking. Prerequisite: Graduate standing.

PSC 712 **3 credits**
Seminar in Intergovernmental Relations

Covers political, constitutional, fiscal, and regulatory aspects of the federal, state, and local governments. Emphasis on relations of state and local governments to the federal government. Satisfies Nevada Constitutional requirement. Prerequisite: Graduate standing.

PSC 719 **3 credits**
Seminar in Advanced Studies in American Politics

Designed to provide specialized and individualized study of selected topics in American politics. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PSC 720 **3 credits**
Seminar in Policy Formation: The Problem of Legitimacy

(*Same as EPS 743.*) What makes a policy legitimate? Analyzes the public policymaking process in terms of such ethical considerations as public vs. private good, legality vs. morality, accountability of policymakers, enforcement of decisions, and evaluation of programs. Prerequisite: Graduate standing.

PSC 721 **3 credits**
Seminar on the Public Policy Process

(*Same as EPS 747.*) Examines the roles of the legislative and executive branches of government in public policy formation and implementation. Surveys empirical techniques used in the field, assesses the impact of ethical theories on the public policy process, and explores selected policy issues in detail. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PSC 722 **3 credits**
Seminar in Environmental Resource Policy

Condition of the global environment, a topic which has risen from relative obscurity after World War II to a topic high on the national and global agenda. Considers the socio-political aspects related to the environment and natural resources, familiarizing students with the policy process and institutions predominant in this area. Prerequisite: Graduate standing.

PSC 723 **3 credits**
Seminar in Policy Analysis

(*Same as EPS 710.*) Aims to enable students to understand and evaluate a range of methods used by professional policy analysts, and to present some of the ethical issues surrounding this practice. Each student is required to locate and critique some examples of policy analysis in his or her own area of interest. Prerequisite: Graduate standing.

PSC 724 **3 credits**
Seminar in Intelligence Policy

Focuses primarily on the U.S. intelligence community as it has evolved since WW II. Emphasis on analysis, overt action and counter-intelligence. Congressional and judicial controls examined. Attention also given to Soviet and other intelligence agencies. Prerequisite: Graduate standing.

PSC 726 **3 credits**
Seminar in National Security Policy

Focuses on national security issues confronting the U.S. including the conduct of conventional warfare, nuclear strategy, deterrence, arms control, Strategic Defense Initiative, alliance formation, and other topics. Prerequisite: Graduate standing.

PSC 728 **1-3 credits**
Practicum in Public Policy

Application of analytical skills and techniques to the examination of, and involvement in, selected policy fields. May be repeated to a maximum of three credits. Prerequisite: Graduate standing.

PSC 729 **3 credits**
Seminar in Advanced Studies in Public Policy

(*Same as EPS 750.*) Designing, researching, and writing an original study in a policy area of the student's choice. Attention to issues of both fact and value in the construction of an intellectually compelling argument. Guidance in developing a prospectus, a pilot project and a research paper. Prerequisites: Graduate standing and PSC 701 and 723.

PSC 730 **3 credits**
Seminar in Constitutional Law

Study of the U.S. Constitution with emphasis on its interpretation, the power of the Judiciary, Congress and Executive. Attention also devoted to federal-state relations and the Commerce Clause. Satisfies the U.S. Constitution requirement. Prerequisite: Graduate standing.

PSC 731 **3 credits**
Seminar in Civil Rights and Liberties

Analysis of the substance and literature on the topic of civil rights and civil liberties in the United States. Prerequisite: Graduate standing.

PSC 733 **3 credits**
Seminar in Public Law and Public Policy

(*Same as EPS 745.*) Focuses on the role of the courts in shaping the different policy areas in the American political system. Prerequisite: Graduate standing.

PSC 735 **3 credits**

Seminar in Jurisprudence

(Same as EPS 746.) Study of the role of morality in the historical and recent debates over the nature of law including: Is a conceptual separation of law and morality desirable?; legal validity; the justification of the judicial decision; finally, the importance of jurisprudence in helping to resolve public policy disputes. Prerequisite: Graduate standing.

PSC 739 **3 credits**

Seminar in Advanced Studies in Public Law

Designed to provide specialized and individualized study of selected topics in public law. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PSC 740 **3 credits**

Seminar in International Relations

Examines concepts, methods and theories in the discipline of international relations and applies these tools to contemporary issues in international politics and economics. Conflict and peace studies, the North-South Dialogue, and futurology. Prerequisite: Graduate standing.

PSC 741 **3 credits**

Seminar in U.S. Foreign Policy

Examines the dynamics of the foreign policy decision-making process, surveys the historical evolution of American foreign policy, and addresses its contemporary issues. Impacts of the changing faces of Communism, third-world nationalism, and global economic and political interdependencies on U.S. foreign policy studied in detail. Prerequisite: Graduate standing.

PSC 746 **3 credits**

Seminar in the Middle East in World Affairs

Develops a framework for the study of international relations of the Middle East; examines domestic, regional and global determinants of external politics in the region; analyzes its great powers' interests and policies (strategic, military, economic, etc.) in this area; and studies intraregional problems including the Arab-Israeli imbroglio, inter-Arab conflicts, and turmoil in Lebanon. Prerequisite: Graduate standing.

PSC 747 **3 credits**

Seminar in International Relations of the Pacific Rim

Examines international relations of the Pacific Rim, a key region in contemporary international politics. Analyzes diplomatic/political, military/security, and economic/trade issues in the region, and assesses the dynamics and interdependence of the region and the region's significance to international politics in the twenty-first century. Prerequisite: Graduate standing.

PSC 749 **3 credits**

Seminar in Advanced Studies in International Relations

Designed to provide specialized and individualized study in selected areas of international relations. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PSC 750 **3 credits**

Seminar in Theory and Methods in Comparative Politics

In addition to a detailed examination of concepts, methods and theories of comparative politics, covers such topics as political development, ethnicity, leadership and political economy. Prerequisite: Graduate standing.

PSC 760 **3 credits**

Seminar in Middle Eastern and North African Politics

Provides students with in-depth analysis of the political institutions, processes, and policies in the Middle East and North Africa. Prerequisite: Graduate standing.

PSC 769 **3 credits**

Seminar in Advanced Studies in Comparative Politics

Designed to provide specialized and individualized study in selected areas of comparative politics. Students advised to take PSC 750 before taking this course. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PSC 771 **3 credits**

Seminar in Political Theory

Analysis and discussion of the major theories and issues of both contemporary political thought and the history of political philosophy. Topic announced by the instructor, but might include the analysis of concepts (e.g., justice, obligation, democracy), major theories, or major texts. Prerequisite: Graduate standing.

PSC 779 **3 credits**

Seminar in Advanced Studies in Political Theory

Designed to provide specialized and advanced study in selected topics in political theory. May be repeated to a maximum of six credits. Prerequisites: Graduate standing and PSC 771.

PSC 780 **1-3 credits**

Internship Program in Political Science

Graduate students have a work assignment in an executive, legislative, or judicial setting, political party, or interest group institution at the national, state or local governmental level and make regular reports on work activities and assigned readings. Substantial written work required. May be repeated to a maximum of six credits with consent of instructor.

PSC 782 **3 credits**

Directed Readings in Political Science

Program of assigned reading in preparation for comprehensive examinations. Prerequisites: Graduate standing and departmental approval.

PSC 789 **3-6 credits**

Thesis

May be repeated but only six credits applied to the student's program. S/F grading only. Prerequisite: Departmental approval.

PSC 790 **3 credits**
Studies in Political Science

Analysis of the research and literature on a selected topic in political science. Specific topic announced each semester. May be repeated to a maximum of six credits.

PSC 794 **1-3 credits**
Independent Study and Research in Political Science

May be repeated to a maximum of six credits with consent of instructor.

Ethics & Policy Studies

Chair

Tamadonfar, Mehran (1987), Associate Professor; B.A., M.A.,
University of Tehran; Ph.D., University of Colorado, Boulder.

Graduate Coordinator

Fott, David S. (1992), Associate Professor; B.A., Vanderbilt University;
A.M., Ph.D., Harvard University.

Steering Committee

Bernick, Lee (2000), Professor; B.A., M.A., Ph.D., University of
Oklahoma.

Fernandez, Kenneth (2004), Assistant Professor; B.A., University of
California, San Diego; M.A., Ph.D., University of California,
Riverside.

Schollmeier, Paul (1989), Professor, B.A., M.A., Ph.D., University of
Chicago.

Simich, Jerry L. (1973), Associate Professor; B.A., California State
University, Long Beach; Ph.D., University of California, Santa
Barbara.

Titus, Dina (1977), Professor of Political Science; B.A., College of
William and Mary; M.A., University of Georgia; Ph.D., Florida State
University.

The Department of Political Science offers a Master of Arts degree in Ethics and Policy Studies (EPS), requiring 33 credits including the core requirements described below. The purpose of this interdisciplinary degree is to build on career experiences of adults working in the public or the private sector who find that they could contribute more to their families, communities, and professions or businesses if they studied ethics and policy. In a period when specialization is required and rewarded, we have become markedly less able to put things together, to cooperate and “see the forest,” because of preoccupation with our own specialized “tree.” Increasingly in a heterogeneous society that prizes the individual, we find that our abilities to create bridges, pool interests, and encompass the knowledge of others play a vital role in our own abilities to do our work well. In addition, questions about ethics in business, government, professions, and the workplace have led to new opportunities for those with skills in moral reasoning and policy.

Admission Requirements

Admission to the department is competitive, with only the strongest applicants gaining admission in any given year. Applicants must submit to the department’s graduate coordinator 1) transcripts of all post-secondary academic work, 2) Graduate Record Examination (GRE) General Test scores, 3) two letters of recommendation from academic referees, and 4) a one-page essay explaining why they want to enter the master’s program. Application forms and fees, official transcripts, and assistantship applications are submitted directly to the Graduate College. Applicants for admission must have earned:

1. A baccalaureate from an accredited college or university.
2. A grade point average of at least 3.00.
3. Satisfactory scores on the GRE General Test. Minimum scores are 500 on the verbal and quantitative sections of the exam; we also consider the analytical writing score. In unusual circumstances, students who do not meet the above criteria may still be admitted.

Program Emphases

Each student will be able to pursue a specialized emphasis in her or his program of studies, contingent on faculty availability. EPS draws upon a wide variety of faculty throughout the UNLV Graduate College. Examples of emphases currently being pursued are:

1. Ethics in business
2. Ethics in government
3. Environmental ethics and policy problems
4. Medical, nursing, and other health care ethics and policy problems

This list is not exhaustive but suggests some of the emphases open to the EPS graduate student.

Degree Requirements

The Master of Arts in Ethics and Policy Studies program requires the following core courses:

1. EPS 701, EPS 702, EPS 710, and EPS 712.
2. Two of the 720-730-740 series chosen from the group comprised of EPS 723, 724, 738, 739, 740, 741, 743, 744, 745, 746, 747, 748, and 749.
3. EPS 750.
4. Six credits of area studies, to be taken before EPS 799 and to be chosen in consultation with one’s advisor.
5. EPS 799 (six credits).

EPS 750 functions as a seminar that integrates practical reasoning and argument analysis with ethics and with policy analysis to conceptualize a single thesis. The seminar and the area studies prepare the student for EPS 799, the thesis, on an issue developed through consultation with one’s EPS advisor and two other faculty. An overall grade point average of 3.00 is required to complete the degree; courses at C+ or below are not counted toward the degree. Core courses must be repeated if failed.

Ethics and Policy Studies

EPS 701 3 credits **Critical Thinking**

Skills of argument analysis and synthesis, using the logic of natural language to locate, evaluate and criticize reasoning in a variety of idioms. Culminates in a topical argument analysis and concluding synthesis of a more whole, defended argument. Prerequisite: Graduate standing.

EPS 702 3 credits **Ethics**

Focuses on the heritage of Western culture, ethics of the person and community, questions of conscience, justice, moral conflict, citizenship, and the issues of consent and dissent. Work is historical and critical, first on interpretation and then evaluation leading to student presentation on a problem in ethics.

EPS 710 3 credits **Seminar in Policy Analysis**

(Same as PSC 723.) Aims to enable students to understand and evaluate a range of methods used by professional policy analysts, and to present some of the ethical issues surrounding this practice. Each student required to locate and critique some examples of policy analysis in his or her own area of interest. Prerequisite: Graduate standing.

EPS 712 3 credits **Seminar in Business and Professional Ethics**

Exploration of applied ethics, which combines the study of justice, human rights, corruption, sexism, or racism, etc., with analysis of existing public- and private-sector practices or laws. Environmental, medical/health care, business, journalism, professional, and government ethics may be explored. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

EPS 723 3 credits **Aristotle's *Nicomachean Ethics***

A close reading of Aristotle's *Nicomachean Ethics*. Major themes explored include moral virtue, intellectual virtue, friendship, and the relationship between philosophy, ethics and politics. May be repeated to a maximum of six credits.

EPS 724 3 credits **Aristotle's *Politics***

Close reading of Aristotle's *Politics*. Major issues to be considered include Aristotle's political naturalism, pluralism and regime classification. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

EPS 738 3 credits **Organizational Ethics**

Focuses on the moral culture of the organization, its practices, reward and punishment systems, rituals, and languages. Examines differences between organizations supportive of or punitive of employees' intellectual integrity and moral autonomy. Organization as a moral habitat, functional or dysfunctional; problems of exit, voice, and

loyalty. Prerequisites: Graduate standing or consent of instructor.

EPS 739 3 credits **Health Care Ethics**

Investigates ethical issues in health care. Philosophical methodologies that help with complex and controversial decision including principlism casuistry, virtue theory, and care ethics. Issues include end-of-life care, informed consent, access to services, HIV, and organ transplantation. May be repeated to a maximum of six credits. Prerequisites: Graduate standing or consent of instructor.

EPS 740 3 credits **Seminar in Organizational and Public Morality**

How organizational practices and policies produce moral consequences. What kinds of organizational responsibility belong to these practices, and how the person working in an organization maintains, balances, or loses moral integrity in such circumstances. Case studies from business, government, professions and community organizations. Prerequisite: Graduate standing or consent of instructor.

EPS 741 3 credits **Environmental Law and Policy Seminar**

(Same as ENV 703.) Substantive aspects of major federal environmental laws and their concomitant regulations, as well as the policy underlying their promulgation and implementation. The present status and implementation of the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the comprehensive Environmental Response, Compensation and Liability Act. Examines policies underlying the existing laws, their derivative regulations, and changes considered by Congress for these laws. Prerequisites: EPS 701, 702, or 712.

EPS 743 3 credits **Policy Formation: The Problem of Legitimacy**

What makes a policy legitimate? Analyzes the public policymaking process in terms of such ethical considerations as public vs. private good, legality vs. morality, accountability of policymakers, enforcement of decisions, and evaluation of programs. Prerequisite: Graduate standing.

EPS 744 3 credits **Citizenship and Public Policy**

Examines the meaning of democracy and explores various proposals for strengthening the life of active citizenship. Balances academic and theoretical concerns with strategic and empowering ones. Students develop a working concept of democratic citizenship and a plan for integrating this concept into real-world policymaking. Prerequisite: Graduate standing.

EPS 745 3 credits **Seminar in Public Law and Public Policy**

(Same as PSC 733.) Focuses on the role of the courts in shaping the different policy areas in the American political system. Prerequisite: Graduate standing.

EPS 746 **3 credits**

Seminar in Jurisprudence

Study of the role of morality in the historical and recent debates over the nature of law including: Is a conceptual separation of law and morality desirable?; legal validity; the justification of the judicial decision; finally, the importance of jurisprudence in helping to resolve public policy disputes. Prerequisite: Graduate standing.

EPS 747 **3 credits**

Seminar on the Public Policy Process

(*Same as PSC 721.*) Examines the roles of the legislative and executive branches of government in public policy formation and implementation. Surveys empirical techniques used in the field, assesses the impact of ethical theories on the public policy process and explores selected policy issues in detail. Prerequisite: Graduate standing.

EPS 748 **3 credits**

History and Policy

(*Same as HIST 748.*) Interdisciplinary historical analysis of American policy formation and failed versus workable policy ideas. Areas of investigation may include policy studies in fields such as labor, urban development, minorities and diplomacy. Prerequisite: Graduate standing.

EPS 749 **3 credits**

Seminar: Political Sociology

(*Same as SOC 776.*) Explores relations between states and social institutions such as social classes, interest groups and systems of cultural and material production and reproduction. Covers issues such as theories of the state, political behavior, and frameworks for development of solutions to various contemporary problems. Prerequisite: Graduate standing.

EPS 750 **3 credits**

Advanced Studies in Public Policy

(*Same as PSC 729.*) Designing, researching, and writing an original study in a policy area of the student's choice. Attention to issues of both fact and value in the construction of an intellectually compelling argument. Guidance in developing a prospectus, a pilot project and a research paper. Prerequisites: EPS 701, 702, 710, and 712.

EPS 790 **1-9 credits**

Ethics and Policy Selected Topics

Designed to allow special attention to be given to ethics and policy problems by way of philosophy, history, political science, sociology, communication studies, or related disciplines. May be repeated, with permission, to a maximum of nine credits.

EPS 799 **3-6 credits**

Thesis

Thesis may be repeated, but only six credits will be applied to the student's program. May be repeated to a maximum of 18 credits with consent of advisor. S/F grading only. Prerequisites: Graduate standing and consent of instructor.

Psychology

Chair

Ashcraft, Mark (2005), B.A., Grinnell College, M.A., Ph.D., University of Kansas.

Graduate Coordinator

Clinical: Heavey, Christopher (1992), Associate Professor; B.A., University of California, Santa Cruz; M.A., Ph.D., University of California, Los Angeles.

Experimental: Allen, Daniel N. (1999), Associate Professor; B.A., Moody Bible Institute; M.S., Eastern Washington University; Ph.D., University of South Dakota.

Graduate Faculty

Barchard, Kimberly A. (2001), Assistant Professor; B.S., Simon Fraser University; M.A., Ph.D., University of British Columbia.

Donohue, Bradley (1998), Assistant Professor; B.A., University of Kansas; Ph.D., Nova Southeastern University.

Ferraro, Douglas P. (1996), Professor; A.B., M.A., Ph.D., Columbia University.

Hurlburt, Russell T. (1976), Professor; B.S.E., Princeton University; M.S., University of New Mexico; Ph.D., University of South Dakota.

Kearney, Christopher A. (1990), Professor; B.A., State University of New York at Binghamton; M.A., Ph.D., State University of New York at Albany.

Kemtes, Karen A. (2001), Assistant Professor; B.S., University of Arizona; M.A., Ph.D., University of Kansas.

Kern, Jeffrey (1990), Associate Professor; B.A., Queens College; Ph.D., State University of New York at Stony Brook.

Knapp, Terry J. (1976), Professor; B.A., B.S., University of Iowa; M.A., University of Northern Iowa; Ph.D., University of Nevada, Reno.

Koettel, Robert C. (1969), Associate Professor; B.A., Otterbein College; M.A., Ph.D., Ohio State University.

Meana, Marta (1997), Assistant Professor; B.A., M.A., Ph.D., McGill University.

Millar, Murray (1990), Associate Professor; B.A., Graceland College; M.S., Eastern Washington University; Ph.D., University of Georgia.

Ramsey, Jennifer L. (2003), Assistant Professor; B.S., Ithaca College; M.A., Ph.D., University of Texas, Austin.

Rasmussen, Charles T. (1972), Associate Professor; B.A., Susquehanna University; M.A., Ph.D., University of Arizona.

Silver, N. Clayton (1997), Associate Professor; B.A., University of Cincinnati; M.S., Ph.D., Tulane University.

Professors Emeriti

Hess, Harrie F. (1965-1989) Emeritus Professor; B.A., University of Nevada, Reno; M.A., Ph.D., University of Colorado.

The Graduate Faculty of the Department of Psychology is comprised of a group of dedicated individuals who have received their training at outstanding graduate programs. We continue to recruit accomplished scholars who will enhance the quality and diversity of the graduate experience available to our students. The department is committed to providing our graduate students with a high quality program balanced across classroom, laboratories, and other research settings; and for clinical students, various practicum placements. The department currently offers M.A. and Ph.D. degrees through programs in Clinical Psychology and Experimental Psychology.

Clinical Psychology Doctoral Program

The UNLV Clinical Psychology Doctoral Program prepares students to address human concerns through both scholarly research and the application of psychological knowledge and skills. We recognize psychology as an empirical science and expect students to have a broad understanding of existing psychological knowledge. We guide students to base their scholarly and professional activity on the scientific foundation of psychology. Through an integration of didactic study, supervised clinical activity, and mentored scholarly research, we prepare students as generalist scientist-practitioners to conduct scientific research and clinical interventions with children and adults. The program is designed to meet the accreditation standards of the American Psychological Association. We will seek accreditation from the American Psychological Association in 2005. The Clinical Psychology Program currently admits only students seeking a doctoral degree.

The program admits students for matriculation only in the fall semester. The application deadline is **January 15** prior to the fall for which matriculation is being requested. Applicants will be notified of their status prior to April 15. We anticipate entering classes of approximately eight students each year. Typical admitted students generally have GPAs above 3.40 and GRE scores above 550.

Admission Requirements

1. A bachelor's degree from an accredited institution or a master's degree or equivalent from an accredited institution. Applicants should have completed at least 18 hours of undergraduate psychology courses including statistics, abnormal psychology, and experimental psychology.
2. Satisfactory scores on the Verbal, Quantitative, and Advanced Psychology sections of the Graduate Record Exam (GRE).
3. Three letters of recommendation.
4. A statement of purpose written by the applicant.
5. A personal interview with members of the program faculty is required for finalists in the selection process. We will notify applicants if they are finalists in February under most circumstances. If a personal interview is not feasible, a telephone interview may be substituted.

In unusual circumstances, students who do not meet these admission requirements may be admitted.

Graduation Requirements

The doctoral degree in clinical psychology requires a minimum of 96 credits. En route to doctoral candidacy the student must complete the requirements for a master's degree in psychology according to the following:

Master's Degree (48 Credits)

- PSY 707: Research Methods
- PSY 708: Statistics for Psychologists I
- PSY 709: Statistics for Psychologists II
- PSY 712: Standardized Tests and Measurements
- PSY 714: Introduction to Clinical and Research Skills
- PSY 715: Assessment of Children
- PSY 716: Assessment of Adults
- PSY 725: Intervention with Children
- PSY 726: Intervention with Adults
- PSY 736: Psychopathology
- PSY 750: Diversity Issues in Professional Psychology
- PSY 755: Ethics and Professional Issues
- PSY 767: Practicum (6 credits)
- PSY 769: Thesis (6 credits). The thesis must be orally proposed and defended.

Doctoral Degree

A master's degree in psychology equivalent to the above and the following 48 credits:

- PSY 767: Practicum (12 credits)
- PSY 770: Dissertation (12 credits). The dissertation must be orally proposed and defended.
- PSY 771: Professional Internship (6 credits)
- Psychology Electives (6 credits)
- Biological aspects of behavior (3 credits)*
- Cognitive and affective aspects of behavior (3 credits)*
- Social aspects of behavior (3 credits)*
- Human development (3 credits)*

Comprehensive examination: The Comprehensive examination for the doctoral program will consist of an examination administered once each year. Students may take the exam after they have completed 48 credits and the Master's thesis.

*Courses must be chosen from approved list in the Student Handbook or be approved by petition of the Clinical Program Committee.

Electives consist of any 700-level psychology course. (PSY 766, PSY 768, PSY 769, PSY 770, or PSY 771). 700-level courses offered by other departments may fulfill the elective requirement with approval of the student's advisor and the Clinical Program Committee.

Students must obtain a grade of B- or better in each course taken for that course to count toward the degree. One grade below a B- (i.e. C+ or lower) will result in probation. Once on probation for receiving a grade below a B-, a second grade (in the same or different classes) below a B-, will result in immediate separation from the program. If a student re-takes a course in which s/he received a grade lower than a B- (i.e. C+ or lower) and earns a B- or better, s/he will be

removed from probation. A student may only be on academic probation twice during their graduate career in Psychology; a third probation will result in separation from the program. No student shall be allowed more than two simultaneous grades of incomplete, except in the case of a documented and approved medical leave.

Students must conform to all policies of the UNLV Graduate College, as stated in the *UNLV Graduate Catalog*, those stated in the UNLV Clinical Psychology Doctoral Program Student Handbook, and the American Psychological Association Code of Ethics. Students will be evaluated at least yearly in the following five areas: (1) academic performance; (2) scholarly research activity; (3) clinical knowledge and skill; (4) ethical behavior and professional conduct; and (5) assistantship performance, if applicable. Inadequate performance in one or more of the five areas of functioning may result in the imposition of additional requirements, loss of Graduate Assistantship, probation, or separation from the program.

Transfer Credits

Admitted Clinical students may transfer up to 26 credits from graduate studies in other programs, contingent upon departmental approval.

Experimental Psychology Doctoral Program

The UNLV Experimental Psychology Doctoral Program trains research psychologists for employment in academic and nonacademic settings. The objective is to produce graduates who will be prepared for a variety of research settings, with a strong emphasis on statistical and methodological skills that can be applied to real world problems. This is a mentored program. Each admitted student will work directly with a specific faculty member who will oversee his/her training. The Experimental Psychology program currently admits only students seeking a doctoral degree. The program admits students for matriculation only in the fall semester. The application deadline is February 1 before the fall for which matriculation is being requested. Review of completed applications will continue until all positions are filled. Applicants are encouraged to submit their materials as early as possible.

Admission Requirements

1. A bachelor's degree from an accredited institution with a minimum GPA of 3.20 (A = 4.00) or a master's degree or equivalent from an accredited institution with a minimum GPA of 3.50. Applicants with a bachelor's degree must have completed at least 18 hours in undergraduate psychology courses including Statistics and Research Methods or their equivalents.
2. Satisfactory scores on the Verbal, Quantitative, and Advanced Psychology sections of the Graduate Record Examination (GRE).
3. Three letters of recommendation.
4. A statement of purpose written by the applicant.

5. Admission to the program will be based on a mentoring model. Students under serious consideration for admission to the Experimental Program are required to have a personal interview with the sponsoring faculty member and at least two other program faculty members. If a personal interview is not financially or pragmatically feasible, a telephone interview may be substituted.

Note: Strong applicants who fail to meet one of the Experimental Program admission requirements may still be considered for admission.

Graduation Requirements

Master's Degree

As a milestone en route to doctoral candidacy, the student must fulfill the following requirements. Upon satisfactory completion of these requirements, a master's degree shall be awarded. A minimum of 33 credits in graduate psychology that include the following:

1. PSY 707: Research Methods
2. PSY 708: Statistics for Psychologists I
3. PSY 709: Statistics for Psychologists II
4. PSY 769: Thesis (minimum 2 semesters, 6 credits). The thesis must be orally proposed and defended.
5. Three of the following courses:
 - PSY 701: Physiological Foundations of Behavior
 - PSY 702: Sensation and Perception
 - PSY 703: Cognitive Psychology
 - PSY 704: Social Psychology
 - PSY 705: Developmental Psychology
 - PSY 706: History of Psychology
6. PSY 758: Proseminar in Experimental Psychology. Course is repeated each semester until the Master's Thesis has been completed.
7. PSY 756: Ethics, Professional Issues, and Diversity in Experimental Psychology

Doctoral Degree

A master's degree in psychology equivalent to the above and a minimum of 39 semester hours in graduate psychology that include the following:

1. Three of the following courses that have not been applied to the student's master degree.
 - PSY 701: Physiological Foundations of Behavior
 - PSY 702: Sensation and Perception
 - PSY 703: Cognitive Psychology
 - PSY 704: Social Psychology
 - PSY 705: Developmental Psychology
 - PSY 706: History of Psychology
2. Psychology Electives (at least twelve credits). Electives consist of psychology courses numbered from 710-765. 700-level courses offered by other departments can fulfill the elective requirement with prior approval of the student's advisor.

3. Major Review Paper. During the third year of the student's graduate studies, s/he is required to complete a major area paper. This paper must present an extensive review of a topic within experimental psychology modeled after articles in *Psychological Bulletin* and *Psychological Review*. When completed, the student presents the paper to his/her committee, and an open discussion and question-answer session then follow.
4. PSY 770: Dissertation (minimum two semesters, six credits). The dissertation must be orally proposed and defended.

Students must obtain a grade of B- or better in each course taken for that course to count toward the degree. One grade below a B- (i.e. C+ or lower) will result in probation. Once on probation for receiving a grade below a B-, a second grade (in the same or different classes) below a B-, will result in immediate separation from the program. If a student re-takes a course in which s/he received a grade lower than a B- (i.e. C+ or lower) and earns a B- or better, s/he will be removed from probation. A student may only be on academic probation twice during their graduate career in Psychology; a third probation will result in separation from the program. No student shall be allowed more than two simultaneous grades of incomplete, except in the case of a documented and approved medical leave.

Students must conform to all policies of the UNLV Graduate College, as stated in the UNLV *Graduate Catalog*, those stated in the UNLV Experimental Psychology Doctoral Program Student Handbook, and the American Psychological Association Code of Ethics. Students will be evaluated at least yearly in the following four areas: (1) academic performance; (2) scholarly research activity; (3) ethical behavior and professional conduct; and (4) assistantship performance, if applicable. Inadequate performance in one or more of the four areas of functioning may result in the imposition of additional requirements, loss of Graduate Assistantship, probation, or separation from the program.

Transfer Credits

Admitted Experimental students may transfer up to 24 credits from graduate studies in other programs, contingent upon departmental approval.

Psychology

PSY 701 **3 credits**
Physiological Foundations of Behavior
 Advanced treatment of basic physiological concepts underlying sensation, perception, cognition, motivation, emotion, and behavior pathologies. Prerequisite: Consent of instructor.

PSY 702 **3 credits**
Sensation and Perception
 Critical review of major theories and issues in perception research, including a discussion of psychophysical methods, general auditory perception, speech, vision, olfaction, gustation, and touch. Prerequisite: Consent of instructor.

PSY 703 **3 credits**
Cognitive Psychology
 Critical review of theory and findings in cognitive psychology, including an evaluation of research in attention, pattern recognition, the representation of events in memory, and language. Prerequisite: Consent of instructor.

PSY 704 **3 credits**
Social Psychology
 Overview of current theory and research in social psychology. Both the limitations and implications of social psychological theory explored using current research evidence. Topics include attitude change, social influence, attribution theory, social cognition, and cross-cultural perspectives. Prerequisites: PSY 460 and consent of instructor.

PSY 705 **3 credits**
Developmental Psychology
 Survey of cognitive, social, and emotional development from birth through adolescence. Prerequisite: Consent of instructor.

PSY 706 **3 credits**
History of Psychology
 Examination of the forces which have shaped the development of the discipline and the practice of psychology, including antecedents in philosophy, physiology, and psychotherapy. Prerequisite: Consent of instructor.

PSY 707 **3 credits**
Research Methods
 Advanced treatment of the issues involved in planning, conducting, and evaluating research. Prerequisite: PSY 606 or equivalent.

PSY 708 **3 credits**
Statistics for Psychologists I
 Treatment of analysis of variance and multiple comparison methods applied to psychological research. Prerequisite: Graduate standing.

PSY 709 **3 credits**
Statistics for Psychologists II
 Treatment of correlation, multiple regression, chi-square, and analysis of covariance as applied to psychological research. Prerequisite: Graduate standing.

PSY 710 **Multivariate Analysis in Psychology** **3 credits**

Examination of multivariate statistical techniques including topics such as multivariate analysis of variance and covariance, discriminant function analysis, profile analysis, factor analysis, principal components analysis, and canonical correlation. Prerequisites: PSY 708 and 709 or equivalent or consent of instructor.

PSY 711 **Advanced Seminar in Psychological Statistics** **3 credits**

Examination of advanced statistical techniques such as nonparametric statistics, meta analysis, time-series analysis, and structural equation modeling. Prerequisites: PSY 708 and 709 or equivalent or consent of instructor.

PSY 712 **Standardized Tests and Measurements** **3 credits**

Principles of evaluating and constructing psychological tests using psychometric theory and behavioral assessment methodology. Prerequisite: Graduate standing.

PSY 714 **Introduction to Clinical and Research Skills** **3 credits**

Procedural, conceptual, and empirical foundations of basic clinical skills and an introduction to clinical research. Prerequisite: Limited to students enrolled in clinical psychology doctoral program.

PSY 715 **Assessment of Children** **3 credits**

Theory and practice of psychological assessment of children. Prerequisite: Limited to students enrolled in clinical psychology doctoral program.

PSY 716 **Assessment of Adults** **3 credits**

Theory and practice of psychological assessment of adults. Prerequisite: Limited to students enrolled in clinical psychology doctoral program.

PSY 725 **Intervention with Children** **3 credits**

Principles and methods of psychological intervention with children. Prerequisite: Limited to students enrolled in clinical psychology doctoral program.

PSY 726 **Intervention with Adults** **3 credits**

Principles and methods of psychological intervention with adults. Prerequisite: Limited to students enrolled in clinical psychology doctoral program.

PSY 727 **Seminar in Clinical Psychology** **3 credits**

In-depth study of selected topics in the science and practice of clinical psychology. Focuses on the etiology, assessment, and treatment of specific clinical disorders such as depression, anxiety-based disorders, autism, substance abuse, sexual dysfunctions and paraphilias, marital dysfunctions. Prerequisites: Completion of year 1 of the Ph.D. program. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

PSY 735 **Counseling: Theory and Practice** **3 credits**

Emphasis on counseling problems, techniques, and practice as well as historic and contemporary therapeutic theories. Includes supervised student counseling. Prerequisite: Consent of instructor.

PSY 736 **Psychopathology** **3 credits**

Advanced treatment of psychopathology covering description, diagnosis, classification, physiological factors, and psychodynamics. Prerequisite: Consent of instructor.

PSY 737 **Child Psychopathology** **3 credits**

Primary features, etiological theories, and epidemiology of behavior disorders in youth. Major diagnostic groupings covered include internalizing disorders (i.e., anxiety, depression, suicide, social withdrawal), externalizing disorders (i.e. ADHD, conduct disorder, substance abuse), pediatric problems, and developmental disabilities (e.g., autism, mental retardation). Prerequisite: Consent of instructor

PSY 740 **Seminar in Developmental Psychology** **3 credits**

Analysis of theoretical concepts and research pertinent to the development of the individual.

PSY 741 **Psychology and Health** **3 credits**

In-depth study of selected topics in the science of health psychology and/or the practice of behavioral medicine. Emphasis on theoretical foundations and empirical findings. Topics permitting, instruction on the clinical practice of behavioral medicine. Prerequisite: Completion of year 1 of Ph.D. program.

PSY 742 **Psychopharmacology** **3 credits**

Overview of the effects of psychotropic drugs on the nervous system and behavior. Topics include pharmacodynamics, pharmacokinetics, principles of chemical neurotransmission, and drug compounds used in the treatment of psychological disorders. Special emphasis given to pharmacological treatments in alcohol and drug abuse. Prerequisite: Consent of instructor.

PSY 743 **Human Sexuality** **3 credits**

In-depth examination of the social and biological foundations of human sexuality. Includes detailed explorations of the latest research on the human sexual response, the relation of sexuality to psychological adjustment, variations in sexual behavior and identity, sexual dysfunction, and sociocultural issues. Prerequisite: Consent of instructor.

PSY 744 **Neuropsychology** **3 credits**

Provides in-depth examination of the area of neuropsychology to include information on the historical roots of neuropsychology, organization of the human nervous system, brain-behavior relationships, higher cognitive functions, assessment techniques, neuropathology, neurological conditions, report writing, and developing recommendations for treatment planning. Prerequisite: Consent of instructor.

PSY 745 **Clinical Geropsychology** **3 credits**

Assessment and psychological treatment of problems experienced in late life. Prerequisite: Consent of instructor.

PSY 746 **Marital and Family Therapy** **3 credits**

Principles and methods of psychological interventions with couples and families. Prerequisite: Consent of instructor.

PSY 750 **Diversity in Professional Psychology** **3 credits**

Acquaints students with the growing body of psychological literature on ethnic, age, life style, and other diversity issues. Emphasis on sensitizing students to unique aspects of minority populations, while enhancing their ability to work with individuals from various backgrounds. Prerequisites: Graduate standing or consent of instructor.

PSY 755 **Ethics and Professional Issues** **3 credits**

Examination of ethical and professional issues related to the practice of psychology. Prerequisites: Consent of instructor.

PSY 756 **Ethics, Professional Issues, and Diversity in Experimental Psychology** **3 credits**

Examination of ethical, professional, and diversity issues related to the practice of experimental psychology. Topics include publishing, grant funding, the professoriate, scientific misconduct, protection of human and nonhuman subjects, and diversity in experimental psychology. Prerequisite: Consent of instructor.

PSY 757 **Teaching of Psychology** **3 credits**

Preparation and presentation of teaching material, the grading process, and solicitation of student feedback, among other variables. Prerequisite: Consent of instructor.

PSY 758 **Proseminar in Experimental Psychology** **1-3 credits**

Weekly forum for students and faculty to discuss professional issues and interdisciplinary research in experimental psychology. May be repeated to a maximum of three credits. Prerequisite: Consent of instructor.

PSY 760 **Advanced Psychological Assessment** **3 credits**

Advanced practice in psychodiagnosis, psychological test administration, scoring, interpretation, and integrated report writing. Prerequisites: Limited to students enrolled in clinical psychology doctoral program and consent of instructor.

PSY 762 **Introduction to Clinical Supervision** **3 credits**

The practice of competent clinical supervision, focusing on the roles and responsibilities of the supervisor, models and methods of supervision, and legal and ethical issues. Concurrent supervision of practicum students. Prerequisites: Limited to students enrolled in clinical psychology doctoral program and consent of instructor.

PSY 763 **Survey of Community Mental Health Resources** **1 credit**

Visits to community psychological facilities with presentations by resource professionals. S/F grading only.

PSY 764 **Family Counseling Practicum** **3 credits**

Supervised practice in counseling with families and couples. Emphasis on understanding functioning at the family system. Prerequisite: Consent of instructor.

PSY 765 **Seminar** **1-6 credits**

Explores a specific aspect of psychology. Department approval must be obtained prior to registration. May be repeated to a maximum of six credits.

PSY 766 **Independent Study** **1-6 credits**

Individual reading projects under the direction of a faculty member. Department approval must be obtained prior to registration. Student may enroll for 1-6 credits per semester. May be repeated to a maximum of six credits.

PSY 767 **Practicum** **3 credits**

Supervised clinical experience at a departmentally approved site. Department approval must be obtained prior to registration. May be repeated.

PSY 768 **3-9 credits**

Independent Research

Individual research projects under the direction of a faculty member. Department approval must be obtained prior to registration. Student may enroll for 3-9 credits per semester. May be repeated.

PSY 769 **3-6 credits**

Thesis

May be repeated, but only six credits will be applied to the student's program. S/F grading only.

PSY 770 **3-12 credits**

Dissertation

Dissertation must be orally proposed and defended. Prerequisite: Department approval must be obtained prior to registration. Student may enroll for 3-9 credits per semester. May be repeated, but only 12 credits will be applied to the student's program. S/F grading only.

PSY 771 **3-9 credits**

Professional Internship

The student must complete a full calendar year APA-approved clinical psychology internship. During the internship year, students must register for six credits of PSY 771: Professional Internship. Students may enroll for 3-9 credits per semester. May be repeated, but only six credits will be applied to the student's program. S/F grading only.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *UNLV Undergraduate Catalog* under the corresponding 400 number. Credit at the 600-level normally requires additional work.

- PSY 606 Intermediate Statistics
- PSY 620 Psychology of Learning
- PSY 680 Experimental Psychology
- PSY 681 Principles of Psychological Testing
- PSY 682 History of Psychology
- PSY 683 Theories of Personality

Sociology

Chair

Smith, Ronald W. (1972), Professor; B.S., Southeast Missouri State College; M.A., Northern Illinois University; Ph.D., Washington State University.

Graduate Coordinators

Hausbeck, Kathryn (1995), Associate Professor; B.A., M.A., Ph.D., State University of New York at Buffalo.

Preston, Frederick W. (1973), Professor; B.A., M.A., Ph.D., The Ohio State University.

Graduate Faculty

Bernhard, Bo (2002), Assistant Professor; B.A., Harvard University; M.A., Ph.D., University of Nevada, Las Vegas.

Brents, Barbara (1987), Associate Professor; B.J., M.A., Ph.D., University of Missouri.

Carns, Donald E. (1973), Professor; B.A., M.A., Southern Illinois University; Ph.D., Indiana University.

Dickens, David (1984), Professor; B.A., Ph.D., University of Kansas.

Fontana, Andrea (1976), Professor; B.A., M.A., Ph.D., University of California, San Diego.

Futrell, Robert (1999), Associate Professor; B.A., University of Kentucky; M.A., Ph.D., University of Kansas.

Gottschalk, Simon (1992), Associate Professor; B.A., Haifa University; M.A., University of Houston; Ph.D., University of California, Santa Barbara.

Keene, Jennifer (2001), Assistant Professor; B.A., Tulane; M.S., Ph.D., Florida State University.

Kent, Stephanie (2005), Assistant Professor; B.A., Capital University; M.A., Ph.D., The Ohio State University.

Morales, Maria Cristina (2004), Assistant Professor; B.A., University of Texas, El Paso; M.S., Ph.D., Texas A&M University.

Parker, Robert E. (1989), Professor; B.S., Southern Illinois University; M.A., Ph.D., University of Texas at Austin.

Prokos, Anastasia (2002), Assistant Professor; B.S., M.S., Ph.D., Florida State University.

Shalin, Dmitri N. (1991), Professor; B.A., M.A., Leningrad State University; Ph.D., Institute of Sociological Research, U.S.S.R. Academy of Science; M.Phil, Ph.D., Columbia University.

Wray, Matt (2001), Assistant Professor; A.A., Keene State College; B.A., University of Michigan; M.A., Ph.D., University of California, Berkeley.

Professors Emeriti

Frey, James (1974-2004), Professor and Dean; B.A., Augustana College; M.A., University of Iowa; Ph.D., Washington State University.

The graduate faculty in sociology consists of scholars/teachers who have earned doctorates at some of the leading graduate schools in the country. The DOS offers three graduate program tracks: a terminal MA program with a specialization in Community Studies; a Ph.D. program for students who have already earned a Masters degree; and a Bachelors to Ph.D. track for qualified students who want to earn their MA and Ph.D. in Sociology at UNLV in a single program. We have five broad areas of specialization in the department: 1. Community Studies; 2. Culture; 3. Inequalities; 4. Social Psychology, Symbolic Interactionism & Deviance; 5. Politics & Institutions. The M.A. program has been in place for many years and has graduated men and women who occupy professional, academic and administrative positions across the nation; beginning with the class of 2005, all graduates of our MA program now have a specialization in Community Studies. The Ph.D. program, which began in 1989, has already graduated more than 33 scholars who hold positions in academia, the non-profit sector and public service. Graduates from our Ph.D. program are trained in advanced theory and methods, and have well-developed expertise in at least two of our departmental areas of specialization. The Sociology department welcomes applications for MA and Ph.D. programs from candidates who can demonstrate a record of significant academic achievement and potential for professional success in sociology.

Master of Arts

The Master of Arts in Sociology program is focused on training students in Community Studies. The program provides students with pre-doctoral training as well as preparation for entry into governmental, nonprofit and private sector employment that deals with community development and organizing, social issues, social policy and social research. Students may choose between two culminating scholarly experiences: the thesis track, or a professional paper. Educational outcomes for our M.A. program include: development of scholarly and professional expertise in community studies, familiarity with both classical and contemporary sociological theories, mastery of both quantitative and qualitative research methods and data analysis, the development of a sociological imagination, and cultivation of analytical research and writing skills which culminate in the ability to either author an independent thesis of substantial depth and quality or a professional paper reflecting sustained engagement in a community project or organization. Graduate-level course work in sociology is restricted to students with graduate standing or graduate provisional status in the department, or to those students who have obtained prior written consent from instructors of specific courses in which enrollment is sought and from the graduate coordinator.

Admission Requirements

The annual deadline for applications is January 31. We only admit new students in Fall semesters. Prospective students must simultaneously apply for admission to the Graduate College and the DOS. See the UNLV Graduate

College website for forms and additional information about how to apply to the Graduate College. Then, please submit copies of everything that you sent in your Graduate College application, as well as the following information and documentation to the Department of Sociology, Attention: Graduate Admissions Coordinator.

1. Applicants should have completed a minimum of 18 credits in sociology. These must include courses such as Introduction to Sociology, sociological theory, research methods and statistics and you must have a GPA in sociology, and overall, of at least 3.00 to be accepted into the program.
2. An original copy of your GRE scores on the General Exam (which must be less than 5 years old); there are no exceptions. Please note that instead of having minimum GRE scores, we consider GRE results as one among many indicators of your graduate success and evaluate them as one part of your overall application.
3. A minimum undergraduate grade point average of 3.00.
4. At least three letters of recommendation, preferably from faculty members who can knowledgeably evaluate your ability to do graduate-level work. These should include comments on the student's academic performance, motivation, character, and promise for success in the M.A. program.
5. A written statement of intent from the student explaining academic background, your interests in sociology, your interest in and commitment to community studies, and your professional career goals.
6. An academic writing sample, preferably one that shows evidence of your written communication and analytical skills, as well as your sociological imagination.
7. International students must take both the TOEFL and the Test of Written English and receive satisfactory scores on both.
8. If you are interested in applying for a Graduate Assistantship, please be sure to indicate this in your written statement and submit the appropriate Graduate Assistantship Application form to the Graduate College (this form is available from the Graduate College). The department will consider all evidence listed above in evaluating the student for potential entry in the program.

Degree Requirements

1. Master of Arts students must complete a minimum of 35 credit hours in courses designated for graduate study in sociology.
 - 1.a Of the 35 credits, six credits must be in SOC 798 if pursuing the thesis option; for students doing the professional paper, three credits must be in SOC 794 and another three credits must be in either SOC 790 or SOC 791.
 - 1.b M.A. students must complete the sequence of core, required courses (SOC 701, 702, 704, 705, 707, 711, 712, 723, 724).

- 1.c Of the 27 required course credit hours, a maximum of 3 hours may be used as **Flex Credits** toward any combination of the following: Independent Study; Directed Reading; an approved 600-level Sociology course that is unavailable at the 700 level; and/or an approved 700 level course in a related discipline.
 - 1.d A minimum of 32 credits must be completed in 700-level Sociology courses.
 - 1.e Grades below a B will not be accepted for graduate credit. If a student receives a grade of less than a B, s/he will be put on probation. Once on probation, if a student receives any additional grades less than a B (in the same class or in different courses) s/he will be separated from the program.
 - 1.f No student shall be allowed more than two simultaneous grades of Incomplete, except in the case of documented and approved medical leave
 - 1.g Please see the Sociology Graduate Program Handbook for additional information about program rules, regulations, guidelines and processes.
2. Master of Arts students are required to conduct original research, write and defend a thesis, *or*, conduct community fieldwork or participate in a community internship, write and defend a professional paper. Students who intend to pursue their graduate education beyond their Masters in Sociology are strongly encouraged to choose the Thesis option.
- 2.a Students must establish a Master of Arts Examination Committee consisting of three Graduate Faculty members in Sociology and one Graduate College representative from another discipline.
 - 2.b Students must work with their M.A. Examination Committee to hold a prospectus proposal meeting, ensure quality research, analysis and writing in the final Thesis or Professional Paper.
 - 2.c Upon completion of the thesis or professional paper, a final oral examination must be held in front of the student's M.A. Examination Committee.
 - 2.d Committee members must unanimously pass the student for the M.A. degree to be conferred.

Doctor of Philosophy in Sociology, Post-M.A. Program

This Doctor of Philosophy in Sociology program is designed for students who have completed a thesis and earned a master's degree in sociology or a closely related discipline, with evidence of substantial expertise in sociology. This program trains students in advanced sociological concepts and applications, as well as advanced theoretical and methodological frameworks for conducting original research. In addition, students develop at least two advanced areas of specialization from among the department's five core areas of specialization (1. Community Studies; 2. Culture; 3. Inequalities; 4. Social Psychology, Symbolic Interactionism and Deviance; 5. Politics, Institutions and Urban). Sociology doctoral students also

have the opportunity to participate in our pedagogy and post-secondary teacher training program. Graduates of this program are well prepared for academic research and teaching positions, as well as careers in applied and community sociology. Educational outcomes for our doctoral program include: development of expertise in both classical and contemporary sociological theories, mastery of both quantitative and qualitative research methods and data analysis, development of specialized expert knowledge in at least two substantive areas, professional socialization, participation in professional organizations, oral presentation skills, familiarity with the process of academic publication of original research, and cultivation of analytical research and writing skills which culminate in the ability to author an original doctoral dissertation of substantial depth and quality. Graduate-level course work in sociology is restricted to students with graduate standing or graduate provisional status in the department, or to those students who have obtained prior written consent from instructors of specific courses in which enrollment is sought and from the graduate coordinator. Please see the Sociology Graduate Student Handbook for up-to-date policies, processes and information.

Admission Requirements

The annual deadline for applications is January 31. We only admit new students in Fall semesters. Prospective students must simultaneously apply for admission to the Graduate College and the DOS. See the UNLV Graduate College website for forms and additional information about how to apply to the Graduate College. Then, please submit copies of everything that you sent in your Graduate College application, as well as the following information and documentation to the Department of Sociology, Attention: Graduate Admissions Coordinator.

1. A master's degree in sociology, or an equivalent master's degree, from an accredited institution in which you wrote and successfully defended a master's thesis.
2. Satisfactory scores that are less than five years old on the general Graduate Record Examination.
3. At least three letters of recommendation, preferably from faculty members who know the your work, evaluating your ability to perform at the Ph.D.-level of study. These should include comments on the student's academic performance, motivation, character, and promise for success in the Ph.D. program.
4. A statement of purpose written by the applicant. Applicants are expected to explain your educational objectives and interests, as well as your professional goals.
5. M.A.-level thesis or at least two original papers of substantial length and quality in an area of sociological inquiry solely written by the applicant.
6. International students must take both the TOEFL and the Test of Written English and receive satisfactory scores on both.

7. If you are interested in applying for a Graduate Assistantship, please be sure to indicate this in your written statement and submit the appropriate Graduate Assistantship Application form to the Graduate College (this form is available from the Graduate College).

Degree Requirements

1. Doctoral students must complete a minimum of 40 credit hours in courses designated for graduate study in sociology and a minimum of 12 Dissertation credits. Dissertation credits may only be taken after the student successfully defends his/her dissertation prospectus and submits required paperwork to the Graduate College. Students may not take more than six Dissertation credits per semester.
 - a. Ph.D. students must complete the three-semester sequence of core, required courses (SOC 701, 702, 704, 705, 707, 708, 723, 724), unless these courses were completed by the student at the M.A. level at UNLV.
 - b. Students must complete one additional advanced 700-level Sociology course in social theory and one additional advanced 700-level Sociology course in statistics or research methods, or equivalents approved by student's Doctoral Examination Committee Chair and the Graduate Coordinator.
 - c. Of the 40 required course credit hours, a maximum of six hours may be used as **Flex Credits** toward any combination of the following: Independent Study; Directed Reading; an approved 600-level Sociology course that is unavailable at the 700 level; and/or approved 700-level course in another department.
 - d. Doctoral students must identify two areas of specialization (Culture; Inequalities; Social Psychology, Symbolic Interactionism and Deviance; Politics & Institutions; or Community Studies) and complete a minimum of 3 credits of advanced study in each area.
 - e. A minimum of 34 course credits must be completed in 700-level Sociology courses.
 - f. A maximum of six credits of Independent Study or Directed Readings are allowed at the Ph.D. level.
 - g. A maximum of six credit hours may be taken in an approved 700 level graduate course in a related discipline.
 - h. Ph.D. candidates are strongly encouraged to enroll in SOC 709, Learning to Teach Sociology. Doctoral students who have completed their Theory and Methods comprehensive exams and SOC 709 may be eligible for autonomous teaching.
 - i. Doctoral students teaching their own autonomous courses must be simultaneously enrolled in SOC 710, Teaching Practicum; after one semester of taking SOC 710 for credit, graduate student instructors may audit the class.
 - j. Any grade below a B will not be accepted for graduate credit. A grade below a B will result in

probation. If a student receives two grades below a B, in the same or different courses, s/he will be separated from the program.

- k. A student may only be on academic probation twice during their graduate career in Sociology; a third probation will result in separation from the program.
 - l. No student shall be allowed more than two simultaneous grades of Incomplete, except in the case of documented and approved emergency or medical leave.
 - m. Please see the Sociology Graduate Program Handbook for additional up-to-date information about program rules, regulations, guidelines, processes and procedures.
2. In addition to a minimum of 40 hours of course work and 12 hours of Dissertation credits, a Doctoral student must successfully pass four comprehensive examinations: one in theory, one in methods and statistics, and two in their chosen areas of specialization. Students should refer to the detailed guidelines governing the comprehensive exam process available in the Sociology Department.
 - a. The Theory and Methods comprehensive exams will each be offered once a semester; students may only take one of these exams per semester. Intention to take one of these exams must be given to the graduate coordinator and senior management assistant by the second week of the semester in which you intend to take one of these exams.
 - b. Students may not take either the Theory or the Methods comprehensive exam until they have completed all required course work in these areas.
 - c. The Theory and Methods exams are in-class exams. Additional guidelines for this process are available in the Sociology Graduate Program Handbook.
 - d. Students are expected to prepare for the Theory and Methods comprehensive exams by reviewing class materials, meeting with their Doctoral Examination Committee, meeting with faculty sitting on the Theory and Methods committees, looking at copies of old exams, and doing systematic independent preparation, including coverage of the department's theory and methods required reading lists.
 - e. Successful completion of both the Theory and Methods exams is required prior to submitting the two specialty area comprehensive exams.
 - f. Each of the two specialty area comprehensive exams are in one of the student's areas of specialization. There are five acceptable formats: a literature review; an annotated bibliography; an in-class exam; a take-home exam; or preparation of a course, complete with lectures. These specialty area comprehensive exams should be designed in close consultation with the student's Doctoral Examination Committee and reflect logical and substantive depth and breadth of knowledge.

- g. There are four possible grades for the comprehensive exams: Pass with Distinction; Pass; Conditional Pass with Rewrites (to be completed within two weeks of notification); or Fail.
 - h. A student must retake a failed comprehensive exam within one year and successfully pass on the second attempt in order to remain in the program. A second failure in the same area will result in separation from the program. During the period of time between the initial Fail on a comprehensive exam and the re-take, the student may not take any other comprehensive exams.
 - i. All four comprehensive exams must be completed prior to the student's Dissertation Prospectus defense and advancement to candidacy.
3. Doctoral students are required to complete a minimum of 12 credits of Dissertation hours (SOC 799), write an original dissertation of substantial quality and length on a sociological topic, and successfully defend this work in front of the student's Doctoral Examination Committee.
- a. Students must establish a Doctoral Examination Committee consisting of at least three Graduate Faculty members in Sociology and one Graduate College representative from another discipline.
 - b. An approved degree program form must be filed with the Sociology Graduate Coordinator and the Graduate College by the end of the student's third semester in the program; this form must be filled out in consultation with the student's Doctoral Examination Committee.
 - c. Students must work with their Doctoral Examination Committee to ensure quality research, analysis and writing of the comprehensive exams and dissertation.
 - d. Satisfactory performance on an oral defense of the dissertation prospectus to be held after the successful completion of all course work and the four comprehensive examination is required. The oral defense will cover the student's dissertation proposal and any deficiencies on the comprehensive exams or in the student's program of study. Upon successful completion of the oral defense of the dissertation prospectus, the student may advance to candidacy and begin enrolling in dissertation credit.
 - e. Upon completion of the dissertation, a final oral defense will be held in front of the student's Doctoral Examination Committee.
 - f. Committee members must unanimously pass the student on her or his oral defense for the Ph.D. to be conferred.

Doctor of Philosophy in Sociology, Bachelor's to Doctorate Program

This Doctor of Philosophy in Sociology program is designed for students holding a bachelor's degree in sociology or a closely related discipline who have a strong record of academic success, are likely to be highly successful

in graduate school, and who have a professional interest in, and commitment to, earning a doctorate in sociology. This program trains students in advanced sociological concepts and applications, as well as advanced theoretical and methodological frameworks for conducting original research. In addition, students develop at least three advanced areas of specialization from among the department's five core areas of specialization. All students will develop a specialization in Community Studies and then choose to specialize in two of the following areas: 1. Culture; 2. Inequalities; 3. Social Psychology, Symbolic Interactionism and Deviance; 4. Politics & Institutions). Sociology doctoral students also have the opportunity to participate in our pedagogy and postsecondary teacher training program. Graduates of this program are well prepared for academic research and teaching positions, as well as careers in applied and community sociology. Educational outcomes for our doctoral program include: development of expertise in both classical and contemporary sociological theories, mastery of both quantitative and qualitative research methods and data analysis, development of specialized expert knowledge in at least two substantive areas, professional socialization, participation in professional organizations, oral presentation skills, familiarity with the process of academic publication of original research, and cultivation of analytical research and writing skills which culminate in the ability to author an original doctoral dissertation of substantial depth and quality. Graduate-level course work in sociology is restricted to students with graduate standing or graduate provisional status in the department, or to those students who have obtained prior written consent from instructors of specific courses in which enrollment is sought and from the graduate coordinator. Please refer to the Sociology Graduate Student Handbook for additional updated information, policies and procedures.

Admissions Requirements

1. A bachelor's degree in sociology from an accredited institution.
2. Satisfactory scores that are less than five years old on the general Graduate Record Examination.
3. At least three letters of recommendation, preferably from faculty members who know the student's work, evaluating the student's ability to perform at the Ph.D.-level of study. These should include comments on the student's academic performance, motivation, character, and promise for success in the Ph.D. program.
4. A statement of purpose, written by the applicant, that evidences all of the following: writing skills, professionalism, educational and professional/career objectives, specific areas of interest in sociology generally, and in the UNLV Department of Sociology specifically.
5. Two original writing samples of substantial length and quality that indicate student's writing and analytical skills, as well as sociological knowledge.
6. International students must take both the TOEFL and the Test of Written English and receive satisfactory scores on both.

7. If you are interested in applying for a Graduate Assistantship, please be sure to indicate this in your written statement and submit the appropriate Graduate Assistantship Application form to the Graduate College (this form is available from the Graduate College).

Degree Requirements

1. Bachelor's to Doctoral students must complete a minimum of 60 credit hours in courses designated for graduate study in sociology as well as a minimum of 12 dissertation credits, for a total of at least 72 credits. Dissertation credits may only be taken after the student successfully defends his/her dissertation prospectus and submits required paperwork to the Graduate College. Students may not take more than six Dissertation credits per semester.
 - a. Students must complete the sequence of core, required courses (SOC 701, 702, 704, 705, 707, 708, 723, 724).
 - b. Students must complete one additional advanced 700-level Sociology course in social theory and one additional advanced 700-level Sociology course in statistics or research methods, or equivalents approved by student's Doctoral Examination Committee Chair and the Graduate Coordinator.
 - c. Of the 60 required course credit hours, a maximum of six hours may be used as **Flex Credits** toward any combination of the following: Independent Study; Directed Reading; an approved 600-level Sociology course that is unavailable at the 700 level; and/or an approved 700 level course in a related discipline.
 - d. Students must complete SOC 711 and SOC 712 as part of the mandatory specialization in Community Studies. These must be successfully completed before taking specialty area comprehensive exams.
 - e. Doctoral students must identify two additional areas of specialization (Culture; Inequalities; Social Psychology, Symbolic Interactionism and Deviance; Politics & Institutions) and complete a minimum of six credits of study in each area.
 - f. Students must complete a minimum of three credits in Field Research, Internship or Teaching Sociology (SOC 790, 791 or 709), as well as 3 credits of Professional Paper before defending their Professional Paper and submitting it to a reputable sociology journal for peer review (See #2 below).
 - g. A minimum of 54 course credits must be completed in 700-level Sociology courses.
 - h. A maximum of six credit hours may be taken in approved 700 level graduate courses in a related discipline.
 - i. Students are strongly encouraged to enroll in SOC 709, Learning to Teach Sociology. Doctoral students who have completed their Theory and Methods comprehensive exams and SOC 709 may be eligible for autonomous teaching.
2. Bachelor's to Doctorate students must establish an Examination Committee, hold a professional paper proposal meeting, author and defend an original piece of research or theory which is then signed-off on by committee members and submitted for peer-review to a reputable sociology journal. The paper need not be accepted for publication for the student to continue matriculating in the program, but the manuscript must make a significant scholarly contribution and be of a high enough quality to merit peer review.
 - a. Students must orally present and defend their completed professional paper to her or his Examination Committee, and receive majority approval.
 - b. After a successful defense of their professional paper, students must receive signatures of support from their Committee Chair and a majority of other Committee members prior to submitting their article manuscript to an approved peer-review sociology journal.
 - c. Students may complete this stage of the program only after successfully completing all 21 core required courses, as well as a minimum of 6 credits of 700-level Sociology electives.
 - d. Students may not take any comprehensive exams or complete more than 40 course credits before successfully completing this step in the program.
 - e. Students who do not complete this requirement in a timely manner (before completing 40 credits) or successfully will be separated from this program.
 - f. In some instances, a student may be eligible to remove themselves from the Ph.D. track and enter the MA program professional paper track before completing the professional paper defense and journal submission process. See section 5 below for additional information.
- j. Doctoral students teaching their own autonomous courses must be simultaneously enrolled in SOC 710, Teaching Practicum; after one semester of taking SOC 710 for credit, graduate student instructors may audit the class.
- k. Any grade below a B will not be accepted for graduate credit. A grade below a B will result in probation. If a student receives two grades below a B, in the same or different courses, s/he will be separated from the program.
 - l. A student may only be on academic probation twice during their graduate career in Sociology; a third probation will result in separation from the program.
 - m. No student shall be allowed more than two simultaneous grades of Incomplete, except in the case of documented and approved emergency or medical leave.
 - n. Please see the Sociology Graduate Program Handbook for additional up-to date information about program rules, regulations, guidelines, processes and procedures.

- g. After successful completion of: all required courses (701, 702, 704, 705, 707, 710, 711, 723, 724), a minimum of 36 total course credits, three credits of thesis or professional paper, and this professional paper process (proposal, research, writing, oral defense and journal submission), students may leave the Ph.D. program track with a Masters degree. See section 5 below for additional information.
3. In addition to a minimum of 60 hours of course work and 12 hours of Dissertation credits, and successful completion of the professional paper process as described above, a Doctoral student must successfully pass four comprehensive examinations: one in theory, one in methods and statistics, and two in their chosen areas of specialization. Students should refer to the detailed guidelines governing the comprehensive exam process available in the Sociology Department.
- The Theory and Methods comprehensive exams will each be offered once a semester; students may only take one of these exams per semester. Intention to take one of these exams must be given to the graduate coordinator and senior management assistant by the second week of the semester in which you intend to take one of these exams.
 - Students may not take either the Theory or the Methods comprehensive exam until they have completed all required course work in these areas.
 - The Theory and Methods exams are in-class exams. Additional guidelines for this process are available in the Sociology Graduate Program Handbook.
 - Students are expected to prepare for the Theory and Methods comprehensive exams by reviewing class materials, meeting with their Doctoral Examination Committee, meeting with faculty sitting on the Theory and Methods committees, looking at copies of old exams, and doing systematic independent preparation, including coverage of the department's theory and methods required reading lists.
 - Successful completion of both the Theory and Methods exams is required prior to submitting the two specialty area comprehensive exams.
 - Each of the two specialty area comprehensive exams are in one of the student's areas of specialization. There are five acceptable formats: a literature review; an annotated bibliography; an in-class exam; a take-home exam; or preparation of a course, complete with lectures. These specialty area comprehensive exams should be designed in close consultation with the student's Doctoral Examination Committee and reflect logical and substantive depth and breadth of knowledge of these areas.
 - There are four possible grades for the comprehensive exams: Pass with Distinction; Pass; Conditional Pass with Rewrites (to be completed within two weeks of notification); or Fail.
 - A student must retake a failed comprehensive exam within one year and successfully pass on the second attempt in order to remain in the program. A second failure in the same area will result in separation from the program. During the period of time between the initial Fail on a comprehensive exam and the re-take, the student may not take any other comprehensive exams.
 - All four comprehensive exams must be completed prior to the student's Dissertation Prospectus defense and advancement to candidacy.
4. Doctoral students are required to complete a minimum of 12 credits of Dissertation hours (SOC 799), write an original dissertation of substantial quality and length on a sociological topic, and successfully defend this work in front of the student's Doctoral Examination Committee.
- Students must establish a Doctoral Examination Committee consisting of at least three Graduate Faculty members in Sociology and one Graduate College representative from another discipline.
 - An approved degree program form must be filed with the Sociology Graduate Coordinator and the Graduate College by the end of the student's third semester in the program; this form must be filled out in consultation with the student's Doctoral Examination Committee.
 - Students must work with their Doctoral Examination Committee to ensure quality research, analysis and writing of the comprehensive exams and dissertation.
 - Satisfactory performance on an oral defense of the dissertation prospectus to be held after the successful completion of all course work and the four comprehensive examination is required. The oral defense will cover the student's dissertation proposal and any deficiencies on the comprehensive exams or in the student's program of study. Upon successful completion of the oral defense of the dissertation prospectus, the student may advance to candidacy and enroll in dissertation credits.
 - Upon completion of the dissertation, a final oral defense will be held in front of the student's Doctoral Examination Committee.
 - Committee members must unanimously pass the student on her or his oral defense for the Ph.D. to be conferred.
5. Bachelor's to Doctorate students who, for personal, professional or academic reasons, decide not to continue on for a Ph.D. *may* be eligible for an optional exit plan with a Masters degree, contingent upon recommendation of approval by the student's Doctoral Examination Committee, the DOS Graduate Committee & Graduate Coordinator(s), and the DOS Chair.
- Students in good standing in the graduate program, who have completed 40 or fewer credits (including all core required courses) and have not successfully defended and submitted their professional paper to a peer-review sociology journal may simply petition to switch to the MA program professional

paper track. If approved, all standard requirements (see above) for the MA must be met for the degree to be conferred.

- b. Students in good standing in the graduate program, who have completed more than 40 credits and have successfully authored and defended a professional paper that has been submitted for peer-review to a sociology journal may simply apply to receive their MA degree.
- c. Students who are not in good academic standing (i.e. are on probation, have failed one or more comprehensive exams, etc.) may petition their Doctoral Examination Committee, the Graduate Coordinator(s) and the DOS Chair to receive an MA degree or be transferred to the MA program. These requests will be reviewed on a case-by-case basis taking into consideration whether or not the student is being separated from the doctoral program (and if so, under what circumstances), the student's progress and stage in the program, and whether the student has completed, or is believed to be able to complete, all requirements for the MA degree.

Sociology

SOC 701 3 credits **Logic of Social Inquiry**

Advanced introduction to theoretical and methodological approaches in contemporary sociology and their interrelationship. Emphasis on three major paradigms in contemporary sociological research, their assumptions, operational strategies and policy implications. May be repeated to a maximum of six credits. Prerequisite: Consent of graduate coordinator.

SOC 702 3 credits **Quantitative Methods**

In-depth review of procedures and issues associated with research design, measurement, sampling, and questionnaire construction in the conduct of survey research, experimentation, and other quantitative research techniques utilized by sociologists. May be repeated to a maximum of six credits. Prerequisites: Consent of graduate coordinator.

SOC 704 4 credits **Advanced Analytical Techniques**

Advanced data base creation and analysis including study of appropriate statistics, mainframe computer experience with mass data software, analytical techniques with varying methodologies, data modelling. May be repeated to a maximum of eight credits. Prerequisite: Consent of graduate coordinator.

SOC 705 3 credits **Qualitative Methods**

Gives students in-depth training in a variety of qualitative methods, both traditional and new (participant observation, latent content analysis, semiotics, deconstruction,

conversation analysis, feminist methodology and critique, etc.). Explores both the theoretical justifications of each method and gives a hands-on experience in their various applications. May be repeated to a maximum of six credits. Prerequisite: SOC 701, consent of graduate coordinator.

SOC 706 3 credits **Seminar in Advanced Statistical Analysis in the Social Sciences**

Examines current approaches to statistical modeling of discrete outcomes. Includes loglinear modeling, logistic regression, and event history analysis. Emphasis on mathematical specification of these approaches, usage of software packages for model estimation and interpretation of results. Prerequisites: SOC 702, SOC 704, and consent of instructor.

SOC 707 1 credit **ProSeminar I**

Course in professional socialization and introduction to graduate program in sociology. Students learn skills necessary for successful matriculation in the graduate program and in academia. Topics include: introduction to faculty research; review of program stages and requirements; conference participation; publishing; CV building. Prerequisite: Consent of instructor.

SOC 708 1 credit **ProSeminar II**

Advanced course in professional socialization. Topics include: conference presentations, comprehensive exam preparation, abstract construction, scholarly writing and publishing, CV building, professional networking, and job market skills. Required for doctoral students; recommended for master's students. Prerequisite: ProSeminar I or consent of graduate coordinator.

SOC 709 3 credits **Teaching Sociology**

Provides a key link for future teaching sociologists, assisting them to make the switch from consumers to educators of the sociological perspective. Places equal emphasis on theoretical issues surrounding teaching with the everyday logistical details of effectively managing a university classroom. Prerequisite: Graduate standing.

SOC 710 1 credit **Teaching Practicum**

Sociology graduate students teaching autonomous classes are required to take this course. Topics covered include: applied pedagogical theory, student learning styles, assignment and test construction, grading, teaching technologies, and creative strategies for teaching particular sociological theories, methodologies and concepts. May be repeated to a maximum of two credits. Prerequisites: SOC 709 or consent of graduate coordinator.

SOC 711 **3 credits**

Community Studies Theory

Examination of major paradigms in community studies and development. Explores classical and current theories emphasizing community definition, functioning, making and sustaining community, and effects of macro forces on micro processes. Students learn how communities work, are defined, and have meaning for the lives of people in them. Prerequisite: Graduate standing.

SOC 712 **3 credits**

Community Studies Research

Prepares students to engage in metropolitan ethnography and field research through exposure to a wide range of urban ethnographies and critical engagement with a variety of methodologies and practices associated with the sociological tradition in community and urban studies. Prerequisite: Graduate standing.

SOC 713 **3 credits**

Seminar in Sport and Leisure

Topics announced each semester.

SOC 714 **3 credits**

Seminar in Work and Occupations

Examination of occupations and the concept of work from the perspective of contemporary sociological research. Selected topics of work and occupations announced each semester. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor or graduate advisor.

SOC 717 **3 credits**

Seminar in Demography and Population Problems

Specific demographic topics and population problems to be announced each semester.

SOC 719 **3 credits**

Seminar in Deviance and Disorganization

Selected topics of deviance and disorganization with specific topics to be announced each semester.

SOC 723 **3 credits**

Classical Sociological Theory

In-depth analysis of the major figures in classical sociological theory. Primary focus on the works of Marx, Weber, Durkheim and Mead, supplemented by a brief discussion of other significant theorists (Comte, Spencer, Simmel, etc.). Prerequisites: Consent of graduate coordinator.

SOC 724 **3 credits**

Issues in Contemporary Sociological Theory

Examines major issues in contemporary sociological theory. Prerequisite: SOC 723 and consent of graduate coordinator.

SOC 725 **3 credits**

Seminar in Pragmatist Hermeneutics

Sociological examination of interpretation theory, its historical development, and contemporary applications. Traces the evolution of key ideas from ancient philosophy and biblical exegesis to pragmatist semiotics that moved

hermeneutics beyond its traditional preoccupation with texts and toward the embodied, emotionally laden forms of signification. Prerequisites: SOC 701, SOC 723 and SOC 724 or consent of instructor.

SOC 726 **3 credits**

Current Debates in Social Theory

Advanced seminar in social theory. Includes a series of approximately three to four debates and/or new perspectives in current social theory literature. In-depth analysis of most up-to-date ideas and issues in social theory. Different topics covered each time course offered. Prerequisites: SOC 701, SOC 723, SOC 724 or consent of instructor.

SOC 733 **3 or 6 credits**

Advanced Social Documentation: Las Vegas

Application of multiple theories and methods of social documentation and community studies. Students read classic works of social documentation, as well as conduct their own field research projects in and around Las Vegas utilizing multiple means of documentation, including ethnography, digital imaging, social mapping, GIS, and interviews. Prerequisites: Graduate standing and consent of instructor.

SOC 737 **3 credits**

Seminar in Criminological Theories

Specific topics and theories to be announced each semester.

SOC 741 **3 credits**

Graduate Seminar in Social Stratification

Analyzes the major systems of stratification including, but not limited to, race, class, and gender. Emphasis on U.S. and examines interrelationships among the various forms of social inequality. Prerequisite: Graduate standing.

SOC 742 **3 credits**

Sociology of Gambling

Provides sophisticated understanding of sociological perspectives of gambling. Recreational gambling behaviors among a variety of subpopulations examined. Phenomenon labeled as “problem gambling” by medical experts also explicitly addressed as well as legislative attempts to confront social costs. Prerequisite: Graduate standing or consent of instructor.

SOC 743 **3 credits**

Seminar in Urbanism and Urbanization

Specific topics announced each semester. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor or graduate advisor.

SOC 745 **3 credits**

The Family-Work Nexus

Examines integral, changing relationship between family and work, emphasizing systematic connection between the two. Includes linkages between work and family; socially constructed gender inequality through work and family activities; and work and family interconnections and conflicts within families whose interests vary. Prerequisite: Graduate standing.

SOC 746 **3 credits**
Seminar in Organizational Theory and Problems
Specific theories and topics announced each semester. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor or graduate advisor.

SOC 747 **3 credits**
Seminar in Marriage and the Family
Specific topics announced each semester. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor or graduate advisor.

SOC 748 **3 credits**
Gender, Sex, Society
Advanced survey course and seminar on the sociology of gender, sex and sexuality. How does the sex/gender system operate within and through social structures? How are gender/sex/sexuality socially constructed? Examines these questions and ways in which gender/sex/sexuality are historically shaped and intertwined. Prerequisite: Graduate standing.

SOC 749 **3 credits**
Sociology of Gender and Work
Political-economic analysis of the organization of work, production and reproduction of labor, and linkages between paid work in the market and unpaid work in the home. Specific topics include occupational sex segregation, segmented labor markets, dialectics of paid and unpaid labor, comparable worth, feminism and bureaucracy, emotional work, domestic labor and strategies for change. Prerequisite: Graduate standing.

SOC 750 **3 credits**
Seminar in the Sociology of Sex
Surveys main theories and debates in sociology of sex and sexuality. Examines sex in relation to economic, cultural, political, international and historical contexts, and in relation to gender, class and racial systems of stratification. Prerequisite: Graduate standing.

SOC 751 **3 credits**
International Issues: Gender, Sex, Globalization
Addresses multicultural feminisms, globalization, human/women's rights, and workings of sex/gender systems in various regions of the world. Prerequisite: Graduate standing.

SOC 755 **3 credits**
Social Movements and Social Change
Provides deep, critical understanding of the presumptions, purposes, limitations, and special strengths of sociological theorizing or social movements and social change. Emphasis on questions about social movements and their historical context and movement formation, organization, careers, participants, ideology and effects. Prerequisite: Graduate standing.

SOC 763 **3 credits**
Symbolic Interaction
Symbolic interaction from the traditional ideas of Mead to the postmodern versions of interactionism. Approaches derived from phenomenology, existential sociology, labeling, ethnomethodology, dramaturgy, feminist interactionism, and postmodernism covered. Pays particular attention to the self. Prerequisite: Graduate standing.

SOC 764 **3 credits**
Seminar in Social Psychology
Specific topics announced each semester.

SOC 766 **3 credits**
Sociology of Culture
Broad introduction in field of cultural sociology --its historical development, different theories and methods, definition and analytical problems. Prerequisite: Graduate standing.

SOC 767 **3 credits**
Visual Sociology: Image, Media, Culture
Role of the visual in sociology as well as sociology of the visual. Addresses issues of visual research methods as well as reviewing theories of images, media and culture. Studies interplay between historical and contemporary social aspects of production and consumption of visual culture. Prerequisite: Graduate standing.

SOC 768 (Formerly SOC 707) **3 credits**
Environmental Sociology
Provides deep, critical understanding of macro-sociological dimensions of environment-society relationship. Emphasis given to sociological approaches to the ideology of environmental domination, capitalist economy and environmental sustainability, rationality and nature, and ecological social movements. Prerequisite: Graduate standing.

SOC 769 (Formerly SOC 765) **3 credits**
Ecology, Culture, Social Psychology
Explores reciprocal influences between ecology, culture, and social psychological dynamics. Examines relation between landscapes and mindscapes, implications of cultural constructions of nature for interactions with/in the natural environment and routine social psychological dynamics, ecological identity, and contours of an ecocentric perspective. Prerequisite: Graduate standing.

SOC 770 **3 credits**
Racial and Ethnic Relations
Historical and contemporary studies of racial and ethnic relations, both in the US and around the world. Emphasis placed on contemporary theoretical and ethnographic work.

SOC 773 **3 credits**
Seminar in Drug Use and Abuse
Specific topics announced each semester.

SOC 774 **Seminar in Feminist Theories and Research** **3 credits**

Current issues in feminist theories and research and feminist critiques of social sciences. Discussions of theoretical as well as epistemological and methodological issues. Prerequisites: Consent of instructor and graduate standing.

SOC 775 **Seminar in the Sociology of Mental Illness** **3 credits**

Specific topics announced each semester.

SOC 776 **Seminar in Political Sociology** **3 credits**

(*Same as EPS 749.*) Explores relations between states and social institutions such as social classes, interest groups, and systems of cultural and material production and reproduction. Covers issues such as theories of the state, political behavior, and frameworks for the development of solutions to various contemporary problems. Prerequisite: Graduate standing.

SOC 777 **Seminar in the Sociology of Education** **3 credits**

Sociological analysis of the institution of education. Primary attention directed toward class, race, and gender inequalities. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SOC 779 **Seminar in Sociology of Aging** **3 credits**

Specific topics announced each semester.

SOC 780 **Aging and Social Policy** **3 credits**

Current issues in public policy in the sociology of aging. Examines the development of policies regarding aging in specific domains (e.g. labor force, retirement, income security, health care); assesses debates on society's risks and responsibilities for elders; and considers impact of history, demographic change, place, and heterogeneity of elders on resource allocation and the lives of elders, families, and communities. Prerequisite: Graduate standing.

SOC 785 **Seminar in Social Policy and Evaluation Research** **3 credits**

Interrelationships of the development of social policy and their requirements for ongoing evaluation as a component part of program development.

SOC 790 **Sociological Internship** **1-4 credits**

Supervised internships in community organizations providing experience in administration, planning, and research. Placements concentrate on the organization and operation of agencies rather than on direct delivery of client services. May be repeated to a maximum of six credits. One to four credits per semester. Prerequisite: Consent of field experience coordinator.

SOC 791 **Field Experience in Sociology** **1-4 credits**

Supervised internships in community organizations providing experience in administration, planning, and research. Placements concentrate on the organization and operation of agencies rather than on direct delivery of client services. May be repeated to a maximum of six credits. One to four credits per semester. Prerequisite: Consent of field experience coordinator.

SOC 794 **Professional Paper** **3 credits**

Research, analysis, writing and editing for students submitting a Professional Paper as the culminating experience in the M.A. program, or for students submitting an article for publication as required in the B.A. to Ph.D. program track. Only three credits may count toward degree. Prerequisites: SOC 711 or SOC 712, and SOC 704, SOC 705, SOC 724 and consent of graduate coordinator.

SOC 795 **Seminar** **3 credits**

Specific topics announced each semester. May be repeated to a maximum of nine credits (contingent on enrollment in different seminar topics).

SOC 796 **Directed Readings** **1-3 credits**

Supervised readings on special topics selected in consultation with a sociology graduate faculty member. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SOC 797 **Independent Study** **1-3 credits**

Consultation course consisting of individual student effort under guidance of instructor. Students assigned to or request assignment to specific problems in sociology on the basis of interest and preparation. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SOC 798 **Thesis** **3 or 6 credits**

May be repeated but only six credits applied to the student's program. S/F grading only.

SOC 799 **Dissertation** **1-6 credits**

Research, analysis, and writing toward completion of the dissertation and preparation for subsequent oral defense. Students are required to complete twelve credits for their doctoral degree; may register for additional credits but they will not count toward degree. S/F grading only. Prerequisites: Advancement to candidacy in Sociology Ph.D. program and consent of instructor.

The following undergraduate courses may be used in the graduate program of study with the approval of the advisor. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

SOC 602	Sociology and Literature
SOC 603	Techniques of Social Research
SOC 603L	Techniques of Social Research Lab
SOC 604	Statistical Methods in the Social Sciences
SOC 604L	Statistical Methods in the Social Sciences Lab
SOC 607	Environment and Society
SOC 608	Qualitative Research
SOC 610	Sociology of Aging
SOC 611	Films and Society
SOC 612	Sociology of Art
SOC 613	Sociology of Sport
SOC 614	Popular Culture
SOC 615	World Population Problems
SOC 616	Sociology of Work and Occupations
SOC 617	Sociology and Leisure
SOC 621	Classical Social Theory
SOC 622	Modern Sociological Theory
SOC 627	Comparative Racial and Ethnic Relations
SOC 628	Special Topics in Comparative Societies
SOC 629	Globalization: Economic, Political, and Cultural Perspectives
SOC 631	Crime and Criminal Behavior
SOC 633	Juvenile Delinquency
SOC 641	Social Inequality
SOC 642	Sociology of Gambling
SOC 643	Urban Sociology
SOC 644	Sociology of Occupations and Professions
SOC 645	Men in Society
SOC 646	Bureaucracy in Society
SOC 647	Marriage and the Family
SOC 649	Sex and Social Arrangements
SOC 651	Russian Society in Transition
SOC 652	Sociology of Youth Cultures
SOC 653	Gender and Society
SOC 660	Critical Sociology
SOC 661	Self and Society
SOC 662	Mass Communications
SOC 665	Collective Behavior
SOC 666	Sociology of Medicine
SOC 667	Sociology of Science
SOC 670	Sociology of Deviance
SOC 671	Racial and Ethnic Conflict in the United States
SOC 673	Sociology of Mental Illness
SOC 674	Sociology of Religion
SOC 675	Political Sociology
SOC 676	Sociology of Education
SOC 678	Women and Society
SOC 681	Sociology of Substance Use, Abuse, and Addiction
SOC 682	Aging and Social Policy
SOC 684	Sociology of Death and Dying
SOC 688	Architectural Sociology
SOC 690	Seminar
SOC 697	Special Topics in Sociology

Women's Studies

The graduate faculty in Women's Studies consists of scholars who have earned their doctorates at leading graduate schools and who have decades of experience in activism as well as in academia. The graduate faculty draws on scholars whose appointments are in the Women's Studies Department and on affiliate faculty housed in many disciplinary departments in the College of Liberal Arts and beyond.

The Women's Studies Department at UNLV has developed a genuinely interdisciplinary curriculum informed by the most advanced scholarship and by feminist pedagogical principles. Having offered an undergraduate degree program for more than a decade, Women's Studies now offers a graduate certificate that will allow students to pursue interdisciplinary study in this flourishing field and thereby enhance their educational background and career opportunities. The graduate certificate will systematically add interdisciplinary breadth to the student's program; develop expertise in women's studies theory and methodology; offer focused study of the new scholarship on gender in its intersections with race, ethnicity, class, and sexuality; and provide a professional credential to supplement other training. Students will develop sophisticated skills in critical listening, thinking, reading, writing, and speaking. Students will be prepared to engage with a broad variety of human issues by focusing on gendered experiences as they are impacted by social constructions of race, class, and sexuality.

Because we live in a time when the understanding of diversity is recognized as essential to our society, formalized course work in women's studies at the graduate level will interest two groups of students and potential students. Graduate students enrolled in master's and doctoral programs throughout the university will find that a graduate certificate in Women's Studies will enable them to study women and gender in interdisciplinary and multidisciplinary ways, complementing their discipline-focused studies in their home departments. Practitioners in the community, such as teachers, nurses, social workers, librarians, managers and administrators of nonprofit and for-profit organizations, constitute a second group for whom in-depth studies of women and gender on the graduate level will enhance both professional endeavors and personal lives. Thus, this graduate program prepares students for careers not only in education at all levels, but in social service work, health services, business, public policy, government, and non-governmental organizations.

Graduate Certificate

Admission Requirements

The certificate is open to graduate students in any discipline and in any college at UNLV and to non-degree seeking students who hold a baccalaureate degree from an accredited institution with a minimum grade point average of 3.0. In addition to being admitted to the Graduate College (please contact the Graduate College for admission procedures), each applicant must show:

- a. (1) A minimum of nine undergraduate credits in women's studies, preferably including courses in feminist theory and/or methodology; or (2) demonstrable familiarity with/background in feminist theory and methodology, including a range of courses focusing on women and gender; or (3) completion of two 600-level Women's Studies or cross-listed courses on women and/or gender; or (4) satisfactory completion of WMST 700, Introduction to Women's Studies.
- b. A minimum undergraduate grade point average of 3.00, with a grade point average of at least 3.30 in women's studies courses.
- c. A statement of purpose describing the relationship of the certificate to the student's intellectual and professional goals. Be detailed and specific. Use this as an opportunity to demonstrate writing as well as analytical skills and knowledge of women's studies. We expect an essay of 1000 words; notes are optional.
- d. Three letters of recommendation, preferably from former instructors or supervisors who can knowledgeably evaluate the student's ability to do graduate level work in women's studies.
- e. A copy of official transcripts sent directly to the Women's Studies Department.

All application material must be sent directly to the Women's Studies Department.

Certificate Requirements

The 15-unit Graduate Certificate consists of three required courses (WMST 701, Feminist Theories; 702, Principles of Feminist Inquiry; and 710, Directed Reading and Research in Women's Studies) and six units of electives in graduate WMST or departmental courses cross listed with women's studies, of which at least three units must be at the 700 level. Candidates for the certificate who are also candidates for a graduate degree may elect no more than three credits in their home discipline. Non-degree candidates may elect no more than three credits in any one department.

WMST 703, Feminist Pedagogy, is required of all students who wish to teach WMST 101, Gender, Race, and Class.

Numerous departments cross-list 400/600 level courses with Women's Studies. See Women's Studies course list flyers available at the beginning of pre-registration each semester.

Women's Studies

WMST 700

3 credits

Introduction to Women's Studies

Satisfies the prerequisite for admission to the women's studies graduate certificate program for those applicants who have no prior knowledge of the field, as demonstrated either by undergraduate course work in women's studies or extensive reading of and familiarity with women's studies scholarship. Prerequisites: Graduate Standing.

WMST 701

3 credits

Feminist Theory

Key currents of discourse within contemporary feminist theory from Virginia Woolf to the present.

WMST 702

3 credits

Principles of Feminist Inquiry

Introduction to the theory and application of research methods from critical feminist inquiry approach. Investigates core scholarship of feminist inquiry applied to research methods in the last twenty-five years.

WMST 703

3 credits

Feminist Pedagogy

Historical development of theory and practice of feminist pedagogy offers opportunity to practice the art. Students prepared to teach interdisciplinary women's studies courses at postsecondary level.

WMST 710

3 credits

Directed Reading and Research in Women's Studies

Capstone seminar provides opportunity for students to reflect critically on theories and methods of interdisciplinary women's studies scholarship and apply them either to production of knowledge in the arts, humanities, social sciences, or natural sciences or to their practice as psychologists, social workers, nurses, librarians, teachers, and other working professionals. Prerequisites: WMST 701, WMST 702.

WMST 721

3 credits

Issues in Women's Nutrition

Advanced discussion of how nutrition affects physical and mental health of women throughout the life cycle and how to evaluate validity of nutrition research as it relates to the needs of women rather than the general population. Prerequisites: Graduate standing.

The following undergraduate courses may be used in the graduate program of study with the approval of the advisor. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

WMST	607	Communication Between the Sexes
WMST	632A	History of American Women to 1870
WMST	632B	History of American Women Since 1870
WMST	648	Gender and Social Interaction
WMST	671	Sexuality, Literature and the City
WMST	672	Controversies in Gender and Race
WMST	691A	Women in the Ancient World
WMST	691B	Women in Medieval Culture and Society
WMST	692A	Women in Early Modern Europe
WMST	695	Special Topics in Gender and History

College of Sciences

The natural and mathematical sciences represent the dual cutting edges of our technological future. UNLV's College of Sciences is dedicated to making that future real, both in the creation of new knowledge through research and in the application of that knowledge in the classroom, the community and the world. These are the guiding principles that bring students, faculty and staff together. Whether in a small discussion session, in a research laboratory or in the field, UNLV College of Sciences graduate students are in an environment in which learning is the common goal. Many students choose a graduate institution based on the reputation of an individual faculty scholar or laboratory group. This is often an excellent approach to finding the right match between a new student and a mentor. However, even those who come to UNLV Sciences without a particular graduate project in mind can count on identifying potential major professors who are receptive to a wide array of interests and backgrounds. The College of Sciences, through its active programs of research and teaching, has been able to assemble a remarkable foundation of state-of-the-art instrumentation and facilities, providing an ever-growing set of opportunities for students who desire the best from their graduate experiences.

Ronald Yasbin, Dean

Master of Arts in Science

The Master of Arts in Science (M.A.S.) is a non-thesis degree designed to allow students to increase their knowledge base in two different fields of science. Traditional and nontraditional students interested in pursuing or advancing science-related careers will discover a host of new opportunities after completing the program. Secondary science teachers who enroll in the program will be better prepared to face classroom challenges with a broad science background.

Program Director

Bhatnagar, Satish C. (1974). Professor; Ph.D., University of Indiana, Bloomington.

This program includes the current graduate faculty, course work and facilities from the departments of Biological Sciences, Chemistry, Geoscience, Mathematical Sciences, and Physics. Any graduate courses offered by these departments can be considered for inclusion in this degree program. In addition, graduate courses from Environmental Studies can be used to satisfy the second field.

Admission Requirements

1. A bachelor's degree in any of the sciences, mathematical sciences or secondary education with at least nine upper-division science/math courses.
2. A minimum grade point average (GPA) of 2.75 for all undergraduate work.
3. Submission of official transcripts of all undergraduate work documenting the above record.
4. A completed admission application submitted to the Graduate College.
5. Three letters of recommendation prepared by persons familiar with the applicant's academic or professional record.
6. A letter of intent.

Degree Requirements

1. Completion of a total of 30 credits of regular course work of which 50% must be at 700 level. Students accepted into the Master of Arts in Science (MAS) program will be required to take at least twelve credits in one major area of one department and at least six credits each in two minor fields of science, mathematics and/or statistics from two different departments in the College.
2. At most six 700 credits outside the College but related with the major/minor may be earned after two semesters with a prior approval of the faculty advisor.
3. No grade below B- can be included in the degree program.
4. Choose either Option A, or Option B
Option A: Course Work. In addition to 30 credits completed in requirements 1 and 2, six credits must be finished at 700 level to make a total of at least 36.
Option B: Project/Paper. It covers for a maximum of six credits in a major area to make a total of at least 33 credits. It requires a project in a major area under the direction of the student's advisor or another member of the student's supervisory Committee. A written proposal must

be submitted to the student's committee before the project can be initiated. This proposal should normally be submitted at the end of the second semester of study. Credit for the project will require a research paper (minimum length 30 pages).

By way of example, the project could involve working with a UNLV science researcher to learn a new technique or to contribute to a field study, or library research on an aspect of science that is new, or the design of a computer program that incorporates recent developments in graphics and software.

Upon completion of the program, the candidate will be required to pass a comprehensive oral exam administered by the supervisory committee. At the time of the oral exam, the student will present the final research paper. The committee will question the student on the project as well as on a broad base of knowledge of major area. The committee will report the result of this exam to the Deans of the Graduate College and College of Sciences.

5. Also, not more than six credits can be earned through independent studies. Graduate credits (minimum acceptable grade of B (3.00)) may be transferred into the program from another accredited institution. However, at least two-thirds of the minimum number of credits required for the graduate degree must be taken at UNLV (not including credits for project/paper).

A student will be placed on academic probation if a minimum 3.00 grade point average is not maintained in all work taken in the degree program.

Biological Sciences

Chair

Reiber, Carl L. (1993), Professor; B.S., M.S., George Mason University; Ph.D., University of Massachusetts, Amherst.

Graduate Coordinator

Riddle, Brett R. (1990), Professor; B.A., University of Northern Colorado, Greeley; M.S., Fort Hays State University; Ph.D., University of New Mexico.

Graduate Faculty

Alden, Raymond W. III (1997), Professor and Provost; B.S., Stetson University; Ph.D., University of Florida.

Amy, Penny S. (1985), Professor; B.S., M.S., Portland State University; Ph.D., Oregon State University.

Andres, Andrew (2002), Assistant Professor; Ph.D., Indiana University.

Carper, Stephen W. (1991), Associate Professor; B.S., Eastern Oregon State College; Ph.D., Utah State University.

Debelle, Steven (1997), Associate Professor; B.S., University of Western Ontario; M.S., Ph.D., York University.

Ferguson, Paul W. (1999), Professor and Dean of the Graduate College; B.A., Whittier College; Ph.D., University of California, Davis.

Hoshizaki, Deborah (1996), Associate Professor; A.B., Wellesley College; Ph.D., University of California, Berkeley.

McGaw, Iain James (1998), Assistant Professor; B.S., Ph.D., University of Wales-Bangor.

Robledo, Eduardo (2002), Assistant Professor; Ph.D., University of Wisconsin.

Roberts, Stephen (1999), Assistant Professor; B.S., M.S., Illinois State University; Ph.D., Arizona State University.

Rodriguez-Robles, Javier (2002), Assistant Professor; University of California, Berkeley.

Schulte, Paul J. (1990), Associate Professor; B.S., M.S., University of Michigan; Ph.D., University of Washington.

Shen, Jeffery (2000), Associate Professor; B.S., South China College of Tropical Crops; Ph.D., Washington University.

Silverton, Susan (2000), Professor; B.S., Massachusetts Institute of Technology; Ph.D., M.D., McGill University.

Smith, Stanley D. (1985), Professor; B.S., M.S., New Mexico State University; Ph.D., Arizona State University.

Stark, Lloyd (1997), Assistant Professor; B.A., Huboldt State University; Ph.D., Pennsylvania State University.

Starkweather, Peter (1978), Professor; B.S., Union College; Ph.D., Dartmouth College.

Thompson, Daniel B. (1990), Associate Professor; B.S., Colorado State University; Ph.D., University of Arizona.

van Breukelen, Frank (2002), Assistant Professor; Ph.D., University of Colorado.

Walker, Lawrence R. (1991), Professor; B.A., Goddard College; M.S., University of Vermont; Ph.D., University of Alaska.

Professors Emeriti

Babero, Bert B. (1965-1987), Emeritus Professor; B.S., M.S., Ph.D., University of Illinois.

Deacon, James (1960-2002), Emeritus Professor; B.S., Midwestern University; Ph.D., University of Kansas.

Murvosh, Chad M. (1964-1992), Emeritus Professor; B.S., Kent State University; M.S., Ph.D., Ohio State University.

Niles, Wesley E. (1968-2002), Professor; B.S., M.S., New Mexico State University; Ph.D., University of Arizona.

Yousef, Mohamed (1968-1994), Emeritus Distinguished Professor; B.S., Ein Shema University; M.S., Ph.D., University of Missouri.

The Department of Biological Sciences offers studies leading to the Master of Science and Doctor of Philosophy degrees. Each degree requires a research thesis (M.S.) or dissertation (Ph.D.). Research leading to the M.S. and Ph.D. degrees may be conducted in one or more of the following fields: molecular biology and genetics, microbiology, cell biology, plant, animal, and comparative physiology, organismal biology, ecology, evolutionary biology, systematics, and biogeography. The department has numerous and well equipped laboratories supporting faculty and graduate student research. These facilities are enhanced through access to a number of specialized scientific resources including an AAALAC-accredited animal care facility, the Ecophysiological Research facility (which includes a greenhouse designed to support elevated carbon dioxide experiments), the Center for Biological Imaging (housing two confocal microscopes), various genomics and proteomics facilities shared across the NSHE system in Las Vegas and Reno, and signification regional biological collections including those of the Niles Herbarium and UNLV's Marjorie Barrick Museum. Numerous funding opportunities are available through state-funded graduate assistant programs, via statewide initiatives or in association with individual faculty research programs. Prospective students should make contact with one or more faculty members to familiarize themselves with current research interests, opportunities for research projects and funding availability. A list of faculty research interests and admission materials can be obtained from the Graduate Coordinator, Department of Biological Sciences.

In addition to the regular faculty research programs, the U.S.G.S. Biological Resources Division Cooperative Research Unit resides within the department. This research unit frequently makes available graduate research assistantships and professional summer employment opportunities. Investigators drawn from the statewide Desert Research Institute of the University and Community College System of Nevada augment our graduate programs in biological sciences.

Prospective students should make contact with one or more faculty members to familiarize themselves with current research interests and opportunities for research projects and funding. A list of faculty research interests and admission materials can be obtained from the Graduate Coordinator, Department of Biological Sciences.

Admission Requirements for Biological Sciences

1. A B.S. degree or its equivalent in the biological sciences or an allied academic discipline.
2. A minimum grade point average (GPA) of 3.00 for all undergraduate work.

Send the following (3 and 4) to:

Graduate College
University of Nevada, Las Vegas
4505 Maryland Parkway, Box 451017
Las Vegas NV 89154-1017

3. A completed application (and payment of required fees).

4. Submission of official transcripts of all colleges and universities you have attended.

Send the following (5-8) to:

Graduate Admissions Committee
Department of Biological Sciences
University of Nevada, Las Vegas
4505 Maryland Parkway, Box 454004
Las Vegas NV 89154-4004

5. Submission of official scores from the GRE Aptitude and GRE Subject Test in Biology. Successful applicants to the program generally have scores among the upper 50th percentile of examinees taking the General and Subject tests.
6. Copies of all transcripts sent to the Graduate College.
7. A statement of interests that should include:
 - a. summary of research interests
 - b. reason(s) for wishing to earn an advanced degree
 - c. motivation for attending UNLV
 - d. possible faculty mentors
8. Letters of recommendation (three letters for Ph.D.; two letters for M.S. program) from persons familiar with the applicant's academic record and potential for advanced study in the biological sciences.
9. Review of completed application files begins in February. Because admissions to the graduate programs are limited and award of financial support competitive, applications should be completed by February to ensure full consideration.

Degree Requirements for Master of Science

Specific degree requirements, including those listed below, are described in detail in the Biology Graduate Student Handbook (available from the Graduate Coordinator, Biological Sciences or on-line at the department's web site).

1. Master's students are required to complete a minimum of 30 credit hours. Eighteen of these hours must be at the 700-level. All students are expected to take BIO 701 (Ethics in Scientific Research) during their first year in residence. All students must also take at least three credits of BIO 796 (Graduate Seminar). Up to six credits of BIO 797 (Thesis) may be counted towards the 30 credit hour minimum. All students are required to have the equivalent of three credits of upper-division undergraduate course work in statistics.
2. Diagnostic interviews are held for all new students in the week prior to the start of the fall semester. Students are expected to have basic knowledge in the following five areas: genetics, cell and molecular biology, physiology, ecology, and evolution. The Graduate Operations Committee meets with each student to review the student's past academic background to determine if there are any specific courses that should be included in the student's M.S. degree program.
3. An incoming M.S. student will be appointed an interim advisor. The interim advisor will assist with designing an initial program of study, engage in discussions about

possible research directions, assist with choosing a thesis advisor, and introduce the student to the personnel and resources available in the Department of Biological Sciences. A thesis advisor should be chosen by the second semester, and the Master's Advisory/Examination Committee should be appointed prior to the end of the second semester. The Master's Advisory Committee will normally consist of the thesis advisor (committee chair), two additional members generally from the graduate faculty of the Department of Biological Sciences, and a graduate faculty representative appointed by the Graduate College. An approved graduate degree program should be filed by the end of the second semester. Students may request a maximum of 15 graduate credits taken at UNLV prior to admission to be included in the graduate degree program, providing those credits were not used to fulfill undergraduate requirements and a grade of B (3.00) or higher was received in each course to be included.

4. A student will be placed on academic probation if a minimum 3.00 grade point average is not maintained in all work taken in the degree program. A grade of C or less in two graduate-level classes will cause a student to be placed on academic probation and will elicit a critical review of the student's degree program by the Graduate Operations Committee.
5. Following the approval by the Thesis Advisor, the M.S. candidate will submit a thesis draft to his or her Master's Advising Committee at least two weeks before an oral defense of the thesis. The M.S. candidate will normally present a seminar on the thesis work that is open to all parties of interest, followed by the oral defense before the Master's Advising Committee and any other graduate faculty members wishing to attend.
6. Academic Residency and Continuous Enrollment: The Graduate College policy dictates that at least 50 percent of all credits required for completion of an M.S. degree must be earned in residence at UNLV after admission into the program. The Graduate College policy on continuous enrollment states that the student must register for at least six semester hours of credit every calendar year, and that he or she must register for at least three semester hours of credit each semester (excluding summer) until the master's thesis is completed and given final approval.

Degree Requirements for Doctor of Philosophy

Specific degree requirements, including those listed below, are described in detail in the Biology Graduate Student Handbook, (available from the Graduate Coordinator, Biological sciences or on-line at the department's web site).

1. Doctoral students are required to complete a minimum of 60-credit hours beyond the baccalaureate degree. Course selection will be based on the student's academic record, the results of a diagnostic interview, and individual goals. For students entering the doctoral program with an M.S. degree, at least 30 credit hours must be completed at UNLV. Of the credits required

for completion of the program, at least 36 (18 for a student with an M.S. degree) must be in courses at the 700-level. All students are expected to take BIO 701 (Ethics in Scientific Research) during their first year in residency. All students must take at least six credits of BIO 796 (Graduate Seminar; the course may be repeated for a maximum of 10 credits). Ph.D. students are required to take a minimum of six credits of BIO 799 (Dissertation). Up to 18 credits of BIO 799 (Dissertation) may be counted toward the 60-credit hour minimum graduation requirement.

2. Diagnostic interviews are held for all new students in the week prior to the start of the fall semester. The Graduate Operations Committee meets with each student to review the courses taken and to determine if there are any basic courses that should be included in the student's degree program. Students are expected to have basic knowledge in the following five areas: genetics, cell and molecular biology, physiology, ecology, and evolution. The Graduate Operations Committee meets with each student to review the student's past academic record to determine if there are any specific courses that should be included in the student's Ph.D. degree program.
3. An incoming Ph.D. student will be appointed an interim advisor. The interim advisor will assist with designing an initial program of student, engage in discussions about possible research directions, assist with choosing a dissertation advisor, and introduce the student to the personnel and resources available in the Department of Biological Sciences. A dissertation advisor and the Doctoral Advisory/Examination Committee should be appointed prior to the end of the second semester. The Doctoral Advisory Committee will normally consist of the dissertation advisor (committee chair), two additional members generally from the graduate faculty of the Department of Biological Sciences, one outside committee member, and a graduate faculty representative appointed by the Graduate College. The outside committee member shall have expertise in the student's field of research, but not be a member of the department, and preferably have an affiliation outside the NSHE System. An approved graduate degree program should be filed by the end of the second semester. Students may request a maximum of 15 graduate credits taken at UNLV prior to admission be included in the graduate degree program, providing those credits were not used to fulfill undergraduate requirements and a grade of B or higher was received in each course to be included. A maximum of 30 credits taken in another degree program (e.g., M.S.) may be requested for inclusion in the doctoral degree with approval.
4. A student will be placed on academic probation if a minimum 3.00 grade point average is not maintained in all work taken in the degree program. A grade of C or less in two graduate-level classes will cause a student to be placed on academic probation and will elicit a critical review of the student's degree program by the Graduate Operations Committee.

5. The student normally will take the comprehensive examination by the start of the third year after matriculation into the program. This exam normally includes both written and oral components and assesses the familiarity of the student with his or her major field of study within the biological sciences. The examination is developed and administered by the Doctoral Advising Committee. If the student fails the examination on the first attempt, a second examination normally will be administered by the Doctoral Advising Committee, but must be completed within the next calendar year.
6. Following the approval by the Dissertation Advisor, the Ph.D. candidate will submit a dissertation draft to his or her Doctoral Advising committee at least four weeks prior to an oral defense of the dissertation. The Ph.D. candidate will normally present a seminar that is open to all parties of interest, followed by an oral dissertation defense before the Doctoral Advising Committee and any other graduate faculty members wishing to attend.
7. Additional Requirements:
 Statistics: Each doctoral student will complete at least one year (a minimum of six credits) of upper-division undergraduate or graduate course work in statistics appropriate to the natural sciences.
 Instructional: Each doctoral student will spend at least the equivalent of one academic year as a Teaching Assistant in the undergraduate curriculum.
 Other: Requirements for additional skills in foreign languages, computer programming, advanced mathematics, or advanced statistics will be determined by each student's Doctoral Advising Committee.
8. Academic Residency and Continuous Enrollment: The Graduate College policy dictates that the Doctoral Advising Committee determines number of credits that must be earned in residence for a doctoral degree. The Graduate College policy on continuous enrollment states that the student must register for at least three semester hours of credit each semester (excluding summer) until the doctoral dissertation is completed and given final approval.

The listing of graduate courses is constantly under review by the department. For the most complete and current description of course availability, please see the appropriate course schedule or contact the department directly. Applicants to graduate programs will automatically receive this listing. Prerequisites are considered guidelines with courses roughly equivalent accepted as prerequisites. Some courses are taught on an "on demand" basis; therefore, students should form interest groups and approach the appropriate faculty members to request a specific course.

Biology

BIO 701 Ethics in Scientific Research **1 credit**

Examination of ethical problems in scientific research, including the falsification and manipulation of data, public access and peer review, and decisions concerning research problems and support. Prerequisite: Graduate standing.

BIO 703 Biochemical Genetics **3 credits**

Detailed study of the structure of nucleic acids and the molecular genetic mechanisms of replication, transcription, and induction and repression of genetic information. Biochemical genetics of gene transfer. Prerequisites: BIO 300 and CHEM 471.

BIO 705 Secondary Education: Teaching Evolution and the Nature of Science **1-3 credits**

Focus on Science and Creationism and hands-on activities and inquiry-based computer simulations that can be used in classrooms to illustrate evolutionary principles. Workshop taught using scientific methods so educators are well-versed in methods of evolutionary study and principles. Follow up sessions explore implementations of lessons from workshop.

BIO 714 Population Genetics **3 credits**

Examines the interactions of evolutionary processes, such as natural selection, genetic drift, gene flow, and mutation, and effects of these interactions on population differentiation, speciation, and extinction. Theoretical and empirical approaches to the study of DNA substitutions and quantitative genetic change addressed. Prerequisites: MAT 180 or 181 and BIO 310 or consent of instructor.

BIO 722 Advanced Taxonomy of Vascular Plants **3 credits**

Identification, classification, and evolutionary relationships of the subfamilies and tribes of the composite, legume, and grass families. Three hours laboratory. Prerequisite: BIO 422.

BIO 730 (A, B, & C) Advanced Research in the Biological Sciences **1-6 credits**

Designed for graduate students working in areas specific to the Biological Sciences. Includes the opportunity for research on topics not specifically covered in listed courses from three general areas: a) ecology & evolution, b) organismal physiology, c) cell & molecular biology. The above sections may be taken for 1-6 credits each with a maximum of six credits with the consent of instructor. Prerequisites: Graduate standing in the M.S. or Ph.D. program and consent of instructor.

BIO 742 **2 credits**
Topics in Advanced Plant Physiology

Advanced treatment of current topics in plant physiology. Topics for consideration selected from one of the three following major subject areas: (a) Water relations, ion balance, and mineral nutrition; (b) Photosynthesis, intermediary metabolism, and plant growth; and (c) Stress physiology. Instructor and students decide which area covered during a given semester. May be repeated to a maximum of six credits. Prerequisite: BIO 442.

BIO 743 **3 credits**
Ecological Plant Physiology

Examination of the physiological responses and adaptations of terrestrial plants to their environment. Primary topics covered include microclimate analysis, water relations, gas exchange, nutrient relations, and adaptations to stress. Adaptations of plants from contrasting physical environments emphasized. Prerequisites: BIO 340 and BIO 442.

BIO 745 **3 credits**
Arid Zone Soils

(Same as GEOL 740.) Role soils have in the soil-plant-atmospheric continuum of arid regions, influence of arid zone soils on all aspects of plant growth and development, influence of soil forming factors on the development of arid soils. Prerequisite: Consent of instructor.

BIO 748 **3 credits**
Environmental Physiology

Examination of physiological responses, including adaptation and acclimatization to extreme physical environments. Consideration of desert, tropical, arctic, mountain, and aquatic environments and their physiology, ecological, and phylogenetic implications.

BIO 755 **4 credits**
Microbial Ecology

Study of microbes as individuals, populations, and communities in freshwater, marine, and terrestrial environments. Topics such as nutrient cycling, biodegradation, and biotechnology discussed from an ecological standpoint. Three hours lecture and three hours laboratory. Prerequisites: BIO 210 and BIO 340 or consent of instructor.

BIO 761 **3 credits**
Bacterial Metabolism

Detailed analysis of selected metabolic processes in bacteria in terms of their energetics, enzyme and protein structure, fluxes, and regulation. Prerequisite: Biochemistry (CHEM 471 or equivalent) or consent of instructor.

BIO 763 **3 credits**
Vertebrate Reproductive Biology

Study of vertebrate reproduction at the systematic, organismal and population levels. Individual or group projects. Prerequisites: BIO 350, 448 or 465, and consent of instructor.

BIO 771 **3 credits**
Aquatic Ecology

Advanced topics relating to the ecological characteristics of aquatic systems. Specific subjects may emphasize either population or community level analysis, using examples from both freshwater and marine habitats. Prerequisite: Consent of instructor.

BIO 781 **3 credits**
Population and Evolutionary Ecology

Advanced topics in population growth, population interaction and evolution in ecological systems. Includes reading and class discussion of both theoretical and empirical material with emphasis on individual student analysis and integration. Three hours of lecture and discussion. Prerequisites: BIO 340 or equivalent and consent of instructor.

BIO 783 **3 credits**
Community and Ecosystem Ecology

Readings and evaluation of the highest levels of organization in ecology through: a) exploration of the fundamental concepts of community distributions, structure, organization, and change; and b) analysis of ecosystem-level processes of primary and secondary production and nutrient cycling. Prerequisites: BIO 340 or equivalent and consent of instructor.

BIO 784 **3 credits**
Conservation Biology

Science of scarcity and diversity viewed from the perspective of understanding the causes and consequences of extinction as well as the conditions necessary for maintenance of biotic diversity. Review regional and worldwide developments in this emerging subdiscipline. Prerequisite: BIO 340 or consent of instructor.

BIO 786 **3 credits**
Bioenergetics

Review of primary and secondary productivity and associated topics dealing with ecosystem energetics. Four hours laboratory. Prerequisite: Consent of instructor.

BIO 787 **1-3 credits**
Research Laboratory Rotation

Provides an opportunity for newly admitted graduate students to experience the research of Biological Sciences graduate faculty through one-on-one interactions. Gives graduate students the information they need to make informal choices about the lab(s) where they carry out their thesis and dissertation research. May be repeated to a maximum of three credits. S/F grading only. Prerequisite: Admission as a regular graduate student in the M.S. or Ph.D. program.

BIO 789 **1-3 credits**
Independent Graduate Study

Project credits for M.A.S. students in some field of Biological Sciences. Proposed project for study must be submitted in writing to the M.A.S. graduate program coordinator. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

BIO 790 **1-3 credits**
Graduate Problems in Biology

Special problems for graduate study in some field of biology. Problems include non-thesis research projects, reading and conference, and library research. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in Biological Sciences.

BIO 791 **2 credits**
Special Topics in Biology

Review of recent literature in a specialized area of biology. Topics selected and published in the class schedule. May be repeated once for credit.

BIO 792 **1-3 credits**
Advanced Topics in Cell and Molecular Biology

Includes papers, oral presentations and discussion of current literature in these fields. Topics announced with each offering. May be repeated to a maximum of six credits. Prerequisites: Graduate standing and consent of instructor.

BIO 793 **1 credit**
Advanced Topics in Organismal Ecology and Evolution

Discussions of current topics and literature in organismal evolution and ecology. Specific topics vary weekly and determined in advance by the discussion group. Students required to select papers from the primary literature and lead a discussion of that paper including the elucidation of major strengths and weaknesses. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

BIO 794 **1-3 credits**
Techniques in Molecular Biology

Introduction to the techniques of modern molecular biology including: separation of nucleic acids by centrifugation, chromatography, and electrophoresis; purification of proteins; determination of nucleic acid and protein sequences; fractionation of cellular components; and cloning and expression of specific genes. Three to nine hours laboratory per week. May be repeated to a maximum of six credits. Prerequisite: BIO 210 or BIO 300 or CHEM 471 or CHEM 474-475.

BIO 796 **1-2 credits**
Graduate Seminar

Preparation and presentation of seminars on topics of current interest in biology. Topic changes by semester; see class schedule. May be repeated as defined in specific graduate programs. Prerequisite: Graduate standing in biology.

BIO 797 **3-6 credits**
Thesis

May be repeated but only six credits applied to the student's program. Enrollment by consent of instructor only. S/F grading only.

BIO 799 **3-6 credits**
Dissertation

Research analysis and writing toward completion of dissertation and subsequent defense. May be repeated but a maximum of only 18 credits may be applied to the degree program. S/F grading only. Prerequisites: Graduate standing in the Biology Ph.D. program and consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

BIO 604	Principles of Neurobiology
BIO 607	Molecular Biology
BIO 610	Virology
BIO 611	Molecular Evolution
BIO 622	Taxonomy of Vascular Plants
BIO 626	Plant Anatomy
BIO 631	Ichthyology
BIO 632	Herpetology
BIO 633	Ornithology
BIO 634	Mammalogy
BIO 641	Field Ecology
BIO 642	Principles of Plant Physiology
BIO 644	Principles of Plant Ecology
BIO 645	Cell Physiology Laboratory
BIO 647	Comparative Animal Physiology
BIO 648	Endocrinology
BIO 653	Immunology
BIO 660	Microbial Physiology
BIO 665	Vertebrate Embryology
BIO 668	Histology
BIO 670	Topics in Applied Microbiology
BIO 672	Limnology
BIO 680	Introduction to Biological Modeling
BIO 685	Microbial Genetics
BIO 687	Principles of Systematics
BIO 689	Developmental Genetics
BIO 690	Biogeography

The following courses offered by other departments may also be taken for graduate credit:

CHEM	672 Biochemistry Laboratory
STA 691	Statistics for Scientists I
STA 692	Statistics for Scientists II
STA 693	Applied Regression Analysis
STA 695	Nonparametric Statistics

Chemistry

Chair

Steinberg, Spencer (1989) Professor; B.A., Ph.D., University of California, San Diego.

Graduate Coordinator

Hodge, Vernon F. (1982), Professor; B.A., M.S., San Diego State University; Ph.D., University of California, San Diego.

Graduate Faculty

Bae, Chulsung (2004), Assistant Professor; B.S., Inha University; M.S., University of Massachusetts, Lowell; Ph.D., University of Southern California.

Bennett, Byron (2000), Assistant Professor; B.A., Cedarville College; Ph.D., University of Wyoming.

Bhowmik, Pradip (1998), Associate Professor; M.S., University of Dhaka; M.S., University of Massachusetts at Dartmouth; Ph.D., University of Massachusetts at Amherst.

Carper, Stephen W. (1991), Professor; B.S., Eastern Oregon State College; Ph.D., Utah State University.

Earl, Boyd (1976), Professor; B.S., University of Idaho; M.S., Ph.D., University of California, Berkeley.

Elegbede, John (1998), Assistant Professor; B.S., M.S., Ahmadu Bello University; Ph.D., University of Wisconsin, Madison.

Gary, Ronald K. (1999), Assistant Professor; B.S., University of California, Irvine; Ph.D., Cornell University.

Hatchett, David W. (1999), Assistant Professor; B.S., California State University, Stanislaus; Ph.D., University of Utah.

Heske, Clemens (2004), Associate Professor; Diploma, TH Darmstadt, Germany; Ph.D., University of Wurzburg, Germany.

Johnson, Allen, L. (1999), Assistant Professor; B.S., California Institute of Technology; M.S., University of Washington; Ph.D., University of California, Berkeley.

Lindle, Dennis W. (1991), Professor; B.S., Indiana University; Ph.D., University of California, Berkeley.

Naduvath, Balakrishnan (2002), Assistant Professor; M.S., University of Calicut, India; Ph.D., Indian Institute of Technology, Kanpur.

Orgill, MaryKay (2003), Assistant Professor; B.S. Brigham Young University; M.S., Ph.D., Purdue University.

Robins, Kathleen A. (1991), Associate Professor; B.S., University of Illinois, Champaign-Urbana; M.A., Ph.D., University of California, Santa Barbara.

Spangelo, Bryan L. (1994), Professor; B.S., Keene State College; Ph.D., George Washington University Medical Center.

Professors Emeriti

Alsop, William M. (1964-1991), Emeritus Associate Professor; B.S., M.E., Ph.D., University of Wyoming.

Billingham, Edward J., Jr. (1965-1988), Emeritus Professor; B.S., Lebanon Valley College; Ph.D., Pennsylvania State University.

Emerson, David W. (1981-1998), Emeritus Professor; B.A., Dartmouth College; M.S., Ph.D., University of Michigan.

Grenda, Stanley C. (1967), Associate Professor; B.S., DePaul University; M.S., University of Arizona; Ph.D., Lehigh University.

Titus, Richard L. (1967-1997), Emeritus Professor; B.A., DePaul University; Ph.D., Michigan State University.

The Chemistry Department offers the Ph.D. in Chemistry and the M.S. in Chemistry or Biochemistry. Students may supplement their programs with appropriate courses from other science departments, with the approval of their graduate committee. Research may include projects conducted in the Chemistry Department, the Harry Reid Center, the Desert Research Institute, or the Environmental Protection Agency.

For additional information contact: Vernon Hodge (Graduate Coordinator) at (702) 895-3845. Web address: can be accessed through the UNLV home page at www.unlv.edu.

Admission Requirements for the Ph.D.

Admission to the Ph.D. degree program in Chemistry requires a B.S. degree or a M.S. degree in Biochemistry, Chemistry, Biology, or a related discipline. A minimum grade point average (GPA) of 3.00 for all undergraduate or graduate work is necessary for admission to the program. The Graduate College requires a completed application and official transcripts. The Department of Chemistry requires a statement of interest from the applicant. In addition, three letters of recommendation from persons familiar with the academic record of the applicant should detail the potential of the applicant for advanced graduate work in Chemistry or Biochemistry. The GRE General Aptitude Test results must be received by the department prior to regular admission.

Individuals with apparent academic deficiencies may be required to enroll in CHEM courses in addition to those required by the program.

Degree Requirements for the Ph.D.

Doctoral students are required to complete a minimum of 60 credit hours beyond the baccalaureate degree. Course selection will be based on students' academic records and fields of interest, e.g., Materials and Molecular Science, Biochemistry, Organic Chemistry, Physical Chemistry, or Environmental Chemistry. All students are required to complete and defend a dissertation describing their research.

Radiochemistry Ph.D. Program

The Radiochemistry Ph.D. Program is a student-driven research intensive program stressing fundamental aspects of radiochemistry science. It was established by the Departments of Health Physics and Chemistry and includes participants from the Harry Reid Center, Nuclear Science and Technology Group. The program is administered by the UNLV Graduate College. The Ph.D. program requires 60 credits of research and courses beyond the baccalaureate degree. Credit is required for four courses in nuclear chemistry, radiochemistry, detectors, and laboratory. The remaining courses are based on the area of interest of the student and include laboratory research. Students are obliged to maintain a B average and show progress in their research. To advance to candidacy, students are required to pass an oral exam on their research and an outside topic related to radiochemistry. The curriculum and research provides a comprehensive and interdisciplinary examination of topics

and experiences necessary to produce graduates who are ready to secure employment and participate in radiochemistry research. An example class schedule for incoming students with a baccalaureate appears below.

Representative program for B.A. student entering UNLV radiochemistry program

Fall semester – Year 1 (8 credits)

RDCH 701 Nuclear Chemistry (3)
RDCH 702 Radiochemistry (3)
RDCH 750 Radiochemistry Laboratory Research (2)

Spring semester – Year 1 (9 credits)

HPS 604 Radiation Measurement and Detection (3)
HPS714 Radiation Detection and Radiochemistry Laboratory (3)
HPS 750 Radiation Risk Assessment (3)

Fall semester – Year 2 (10 Credits)

RDCH 710 Actinide Chemistry (3)
HPS 670 Environmental Health Physics (3)
MEG 656 Radioactive Waste Management (3)
CHEM 791 Chemistry Seminar (1)

Spring semester – Year 2 (7 Credits)

CHEM 655 Instrumental Analysis (3)
MEG 655 Fundamentals of Nuclear Engineering (3)
HPS 791 Health Physics Seminar (1)

Fall semester – Year 3 (7 Credits)

RDCH 799 Doctoral Dissertation (3)
GEY 708 Isotope Geochemistry (3)
HPS 791 Health Physics Seminar (1)

Spring semester – Year 3 (6 Credits)

RDCH 799 Doctoral Dissertation (5)
CHEM 791 Chemistry Seminar (1)

Fall semester – Year 4 (7 Credits)

RDCH 799 Doctoral Dissertation (4)
CHEM 795 Independent Study (2)
CHEM 791 Chemistry Seminar (1)

Spring semester – Year 4 (6 Credits)

RDCH 799 Doctoral Dissertation (6)

Admission Requirements for the M.S.

Admission to the program requires an undergraduate degree in chemistry, chemical engineering, biology, biochemistry or a related discipline, with a cumulative GPA of 2.75, or of 3.00 for the last two years of undergraduate work. An application must be submitted to the Graduate College, with official transcripts of all college-level work. Two letters of recommendation from individuals able to assess the applicant's potential as a graduate student should be sent directly to the department along with an additional set of transcripts. The GRE General Aptitude Test results must be received by the department prior to regular admission.

Individuals with apparent deficiencies in their undergraduate background may be required to enroll in selected courses in addition to those listed in the following section to satisfy M.S. degree requirements.

Degree Requirements for the M.S.

1. A minimum of 30 graduate credits is required, of which 10-13 must be in CHEM 795 and CHEM 798 (a minimum of six) and two in CHEM 791. At least 12 of the remaining credits must be in courses at the 700 level, excluding those course numbers listed above. The Biochemistry Program should include CHEM 770, 771, 772, 773, 672, and BIO 701. A grade point average of at least 3.00 must be achieved in all course work required for the degree. No grade lower than C is acceptable, and only one grade below B- is permitted.
2. Research and course work specializations are available in analytical chemistry, biochemistry, organic chemistry, and physical chemistry. The individual student's program of course work must be selected in consultation with and approved by the student's committee, and may include courses from selected disciplines other than chemistry, such as biology, physics, civil and environmental engineering, or water resources management.
3. Students are expected to select a research advisor by the end of their first semester.
4. Each student is required to present a departmental seminar on the student's research prior to graduation. This requirement is in addition to the two credits in CHEM 791. Students are expected to attend weekly departmental seminars.
5. Each student is required to meet at least once per semester with the student's examination committee. At the meeting in the semester prior to the expected term of graduation, the student will be asked to make a detailed presentation on research progress. The committee will then make recommendations to be addressed by the student during the remainder of the student's research program, in writing the thesis, and in the final examination. The committee may request another meeting prior to the final exam if deemed necessary.

It is expected that each student be a teaching assistant for a minimum of two courses prior to graduation. It is also expected that each student publish at least one research-based manuscript in a peer-reviewed journal.

Chemistry

CHEM 710 3 credits

Environmental Aquatic Chemistry

Study of the chemistry of natural waters, emphasizing chemical speciation and the interaction of aqueous media with soil and air. Considerable attention given to the use and limitations of thermodynamic equilibrium models of chemical speciation. Prerequisite: Graduate standing or consent of instructor.

CHEM 715 3 credits

Environmental Organic Chemistry

Organic chemistry of natural waters, soils and the atmosphere, emphasizing chemical reactions, sorption, bio-concentration and fate and transport. Use and limitation of thermodynamic and kinetic models and the extrapolation of laboratory data to environmental conditions. Prerequisites: Graduate standing in chemistry or consent of instructor.

CHEM 725 3 credits

Advanced Organic Chemistry

Advanced study of structures and reactions of organic compounds. Reactive intermediates, reaction mechanism, stereochemistry, and synthesis examined. Prerequisites: CHEM 242 and 421.

CHEM 726 3 credits

Organic Synthesis

Study of the synthesis of complex organic molecules. Stereochemistry, use of organometallic reagents and chiral auxiliaries stressed, with considerable emphasis on current literature. Prerequisites: CHEM 242, 421.

CHEM 728 2 credits

Organic Synthesis Laboratory

Some reasonably challenging syntheses undertaken to include reactions requiring rigid exclusion of air and moisture. Products characterized by modern spectroscopic methods. Eight hours laboratory per week. Prerequisites: CHEM 242, 421, 447 or consent of instructor.

CHEM 735 3 credits

Advanced Physical Chemistry

Statistical and quantum mechanics and their use in calculating thermodynamic properties. Prerequisites: CHEM 421 and 428.

CHEM 745 3 credits

Instrumental Analysis-Inorganic

Theory of modern analytical instrumentation as it pertains to inorganic analysis. May include atomic emission and absorption, x-ray, radioactivity and mass spectroscopic methods.

CHEM 746 3 credits

Instrumental Analysis-Organic

Theory of modern analytical instrumentation as it pertains to organic analysis. May include gas chromatography-mass spectrometry, supercritical fluid chromatography, nuclear magnetic resonance, Fourier transform infrared methods and fluorescence techniques.

CHEM 750 3 credits

Quality Assurance and Statistics

Purpose, theory, and applications of quality assurance/quality control. Experimental design including development of sampling protocols. Statistics relating to the evaluation of data quality covered. Not a theoretical statistics course. Prerequisites: STA 161 and CHEM 455.

CHEM 752 3 credits

Chromatography

Theory and applications of chromatography as the basis of analytical separations for inorganic and organic analyses. Separating power, selectivity, efficiency, and limitations of the various methods discussed. Prerequisites: CHEM 241, 422, and 455.

CHEM 755 3 credits

Sample Preparation and Analysis

Collection, preparation, and analysis of gaseous, soil, and water samples using approved standard methods. Techniques used may include gas chromatography, gas chromatography-mass spectroscopy, high performance liquid chromatography, atomic absorption spectroscopy, and inductively coupled plasma atomic emission spectroscopy. One hour lecture and six hours laboratory. Consult instructor(s) prior to enrollment. Prerequisite: Graduate standing in chemistry.

CHEM 760 3 credits

Environmental Radiochemistry/Radiation Safety

Practical applications of radiochemistry to topics of current and future concern, such as the temporary and permanent storage of radioactive wastes, nuclear utilities, nuclear medicine and isotope geology. Includes advanced radiochemical techniques and radiation safety training. Prerequisites: CHEM 421 and 422 or equivalent, or consent of instructor.

CHEM 765 3 credits

Inorganic Chemistry

Physical approach to inorganic compounds, mainly of the transition elements including bonding, stereochemistry, and electronic properties with use of symmetry and elementary group theory. Prerequisite: CHEM 422.

CHEM 770 3 credits

Protein Chemistry

Practical applications of protein purification, including gel electrophoresis, gel filtration and ion-exchange chromatographies. In addition, aspects of enzymology (kinetics, regulation) presented. Prerequisite: CHEM 475.

CHEM 771 3 credits

Metabolism and Energetics

Biochemical pathways of carbohydrate, lipid, nucleic acid and amino acid metabolism and the mechanism of mitochondrial ATP synthesis. Prerequisite: CHEM 475.

CHEM 772 **3 credits**
Nucleic Acid Chemistry
Structure, function, and regulation of nucleic acids. Synthesis, transport, and degradation of proteins encoded by nucleic acids. Prerequisite: CHEM 475.

CHEM 773 **3 credits**
Physical Biochemistry
How physical chemical methods may be applied to the problem of the structure and interaction of biochemical macromolecules. Includes discussion of application of radioactivity, electrophoresis, chromatography, various forms of spectroscopy, and polymer methods such as sedimentation and viscosity measurements. Prerequisite: CHEM 475.

CHEM 775 **3 credits**
Bioanalytical Environmental Toxicology
Principles of toxicology. Study of the interaction of toxicants with biochemical pathways. Emphasis on toxic chemicals of environmental interest. Prerequisite: CHEM 475.

CHEM 784 **1 credit**
Spectral Interpretation Laboratory
Identification and characterization of an organic compound using infrared, ultraviolet, mass, and NMR spectrometers. Proton, carbon-13, and two-dimensional NMR spectra used to fully determine the structure. Corequisite: CHEM 683.

CHEM 791 **1 credit**
Graduate Seminar
Attendance and participation in seminar presentations and discussions of specialized topics. Includes student presentations. Students required to enroll for a minimum of two semesters and present a minimum of two presentations. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in chemistry.

CHEM 793 **1-3 credits**
Special Topics
Study of topics of common interest in relation to environmental analytical chemistry at an advanced level. Topics published in the class schedule. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in chemistry.

CHEM 795 **1-3 credits**
Independent Study
Individual directed study of a topic not covered in other courses. May be repeated once for credit. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in chemistry and consent of instructor.

CHEM 798 **3-6 credits**
Thesis
May be repeated, but only nine credits applied to the student's program. S/F grading only. Prerequisites: CHEM 745 or CHEM 746 and consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

CHEM 602 Scientific Software for the Microcomputer
CHEM 621 Physical Chemistry I
CHEM 622 Physical Chemistry II
CHEM 628 Quantum Chemistry
CHEM 649 Polymer Chemistry
CHEM 655 Instrumental Analysis
CHEM 672 Biochemistry Laboratory
CHEM 678 Endocrinology
CHEM 683 Spectral Interpretation

Radiochemistry

RDCH 701 **3 credits**
Nuclear Chemistry
Introduces nuclear properties in radiation and radiochemistry. Concepts of the nuclei, radioactive decay, and nuclear reactions examined. Use of quantum mechanics in development of nuclear models and equations. Physics involved in interaction of radiation with matter. Prerequisites: General physics, graduate standing in Radiochemistry program.

RDCH 702 **3 credits**
Radiochemistry
Introduces chemical properties in radiation and radiochemistry. Use of stability constants and relationship between speciation, kinetics and thermodynamics. Influence of radiolysis on chemistry of radioisotopes. Radioisotope production and use. Radiochemical separations. Prerequisites: Inorganic chemistry, physical chemistry, graduate standing in Radiochemistry program.

RDCH 710 **3 credits**
Actinide Chemistry
Basis for unique chemistry of actinide elements described and related to oxidation-reduction, complexation, f-orbital interaction, and spectroscopy. Using nuclear properties in understanding actinide chemistry covered. Presentations on exploiting chemical behavior of actinides in separation, nuclear fuel cycle, environmental behavior, and materials. Prerequisites: RDCH 702, graduate standing in Radiochemistry program.

RDCH 750 **3 credits**
Radiochemistry Laboratory Research
Experimental laboratory research conducted by the student under supervision. The student supplies research topic and provides suitable literature and background information. Research plan developed in conjunction with instructor. The student obtains experience in performing radiochemical laboratory research. Prerequisites: Undergraduate chemistry laboratory experience, graduate standing in the Radiochemistry program.

Geoscience

Chair

Taylor, Wanda J. (1991), Professor; B.S., University of Minnesota; M.S., Syracuse University; Ph.D., University of Utah.

Graduate Coordinator

Hanson, Andrew (2000), Assistant Professor; B.S., Montana State University; M.S., San Diego State University; Ph.D., Stanford University.

Graduate Faculty

- Buck, Brenda (1998), Associate Professor; B.S., University of Notre Dame; M.S., Ph.D., New Mexico State University.
- Cline, Jean S. (1990), Professor; B.S., Wisconsin State University; M.S., University of Arizona; Ph.D., Virginia Polytechnic Institute and State University.
- Crow, H. Clay (1993), Instrumental Analyst; M.S., California State University; B.S., UNLV; Ph.D. New Mexico Institute of Mining and Technology.
- Drohan, Patrick J., (2003), Assistant Professor; B.S., Rutgers University, M.S., Ph.D., Pennsylvania State University.
- Fairhurst, Robert (2002), Research Technician; B.S. Nottingham University, Ph.D., University of Houston.
- Jiang, Ganqing (2004), Assistant Professor; B.A., Xiangtan Mining College; M.Sc., China University of Geosciences; Ph.D., Columbia University
- Johnson, Kimberly (2005), Assistant Professor in Residence; B.S., M.S., Ph.D., Old Dominion University.
- Kreamer, David K. (1990), Professor; B.S., M.S., Ph.D., University of Arizona.
- Lachniet, Matthew (2003), Assistant Professor; B.A., Antioch College; M.S., Michigan State University, Ph.D., Syracuse University.
- Metcalf, Rodney V. (1991), Associate Professor; B.S., M.S., University of Kentucky; Ph.D., University of New Mexico.
- Nicholl, Michael (2004), Assistant Professor; B.S., Eastern Michigan University; M.S., Ph.D., University of Nevada, Reno.
- Rowland, Stephen M. (1978), Professor; A.B., University of California, Berkeley; Ph.D., University of California, Santa Cruz.
- Smith, Eugene I. (1980), Professor; B.S., Wayne State University; M.S., Ph.D., University of New Mexico.
- Snelson, Catherine M. (2002), Assistant Professor; B.S., California State University, Hayward; M.S., Ph.D., University of Texas, El Paso.
- Spell, Terry (1996), Associate Professor; B.S., West Georgia College; M.S., New Mexico Institute of Mining and Technology.; Ph.D., State University of New York, Albany.
- Wells, Michael L. (1993), Professor; B.S., University of California at Santa Cruz; M.S., Ph.D., Cornell University.
- Yu, Zhongbo (1999), Associate Professor; B.S., Hohai University; M.S., University of Southern Mississippi; Ph.D., Ohio State University.

Professors Emeriti

- Bachhuber, Frederick W. (1974-2002), Emeritus Professor; B.S., M.S., University of Wisconsin; Ph.D., University of New Mexico.
- Barth, Delbert S. (1983-1994), Emeritus Professor; B.S., U.S. Military Academy; M.S., Ohio State University; M.S., Stevens Institute of Technology; Ph.D., Ohio State University.
- Weide, David L., (1973-2004), Emeritus Professor; A.B., Ph.D., University of California, Los Angeles, M.A., California State University, Los Angeles.
- Wyman, Anne F. (1966-1994), Emeritus Assistant Professor; A.B., Case Western Reserve University; M.S., University of Michigan.

The Department of Geoscience is an active and enthusiastic department consisting of seventeen full-time faculty, approximately thirty-five graduate students and 80 undergraduate majors. The department offers a program of courses, seminars and research opportunities leading to Master of Science and Doctor of Philosophy degrees in Geoscience. The interests of the faculty and students cover a wide range of topics. Graduate students can choose one of four Geoscience topics: Geology, Geophysics, Hydrogeology, and Soil Science. Active research by faculty and students is ongoing throughout the western United States as well as in Central Europe, China, Australia, Canada, Jordan, Mexico, New Zealand, Russia, Spain, and South America.

The department encourages interdisciplinary research. Opportunities for geological and interdisciplinary research may be pursued with organizations near or on campus that cooperate with the department including: the Harry Reid Center for Environmental Studies; the Water Resources Center of the Desert Research Institute (DRI), a division of the University and Community College System of Nevada; the Environmental Monitoring and Support Laboratory of the Environmental Protection Agency (EPA); the Department of Energy; and other university departments such as biology, chemistry, physics, and engineering.

Students are encouraged to read the general graduate college rules and regulations elsewhere in this catalog and to read the Department of Geoscience Graduate Student Guidelines, which are provided to each new graduate student and available in the department office. An understanding of these documents is essential for satisfactory progress toward the degree.

Admission Requirements for M.S. and Ph.D. Degrees in Geoscience

Admission for any of the four emphases may be in the spring or fall semester. The deadline for fall semester application is February 1. The deadline for spring semester application is October 1.

Admission and degree requirements for the Department of Geoscience are listed below. These requirements apply to all of the emphases. Note that each emphasis has requirements in addition to those listed below. Please check the section describing the emphasis of interest to you.

General Admission Requirements Common to All Geoscience Emphases

1. A B.S. degree (specific degree requirements are listed under each emphasis description). A master's degree is recommended but not required for admission to the Ph.D. program.
2. A minimum overall grade point average of 3.00 (on a 4.00 scale).
3. Satisfactory scores on the general Graduate Record Examination (GRE).
4. Three letters of recommendation from individuals competent to comment on the applicant's promise as a graduate student.
5. A letter of application stating interests and goals for graduate study. This is a 1-2 page essay describing the applicant's reasons for considering graduate study, goals after completion of the graduate degree, and the applicant's specific areas of interest.
6. Submission of official copies of academic transcripts.
7. Submission of an application and fees to the Graduate College.
8. All international students whose first language is not English or who have not received baccalaureate or master's degrees from an institution in which the language of instruction is English must take the TOEFL (Test of English as a Foreign Language) examination. A TOEFL score of 550 on the paper test or a score of 213 on the computer-based test is required for admission.

Degree Requirements for Master of Science

A minimum of 30 credit hours beyond the undergraduate degree is required for the M.S. degree in Geoscience. Six credits of GEOL 797 (thesis) and 24 credits of course work will be counted toward the degree program although more course and thesis credits may be taken. Of the 24 required course credits, at least 12 credits must be in 700-level courses and include GEOL 701 and 795. GEOL 701 and 795 should be taken during the first year of enrollment. Credits taken at another institution will be considered for transfer, however, at least 16 of the 24 course credits required for the degree must be taken at UNLV.

Students must confer with their appointed advisor prior to enrollment in their first semester. An approved degree program and thesis prospectus must be filed with the Graduate College, and a thesis committee must be appointed by the end of the second semester after admission to the college. This responsibility rests with the student. Students will be dropped from the program and separated from the Graduate College if they fail to fulfill this requirement.

Satisfactory progress toward meeting the degree requirements is required of all students. Satisfactory progress includes maintaining at least a 3.00 grade point average in all graduate-level courses. One grade of B- is permitted in the degree program as long as the GPA remains at or above 3.00. One grade of C+ or lower automatically puts the student on probation even if the GPA remains above 3.00. Two grades of C+ or lower will result in automatic suspension from the program.

Degree Requirements for Doctor of Philosophy

The doctoral degree requires course work, written and oral examinations, and a written dissertation, which may consist of three or more publishable papers. A minimum of 60 credits past the baccalaureate or bachelor's degree is required. Students entering the Ph.D. program with an M.S. degree in geology or a related field will be awarded 24 credits toward the Ph.D. Credits taken at another institution will be considered for transfer; however, at least two-thirds of the minimum number of credits required for the degree, not including dissertation credits, must be taken at UNLV.

Course selection is based on the student's research objectives. The student, the advisor and the doctoral advising committee will design the degree program. All Ph.D. students must take at least 12 credits of GEOL 799 (Dissertation). The 60 credits required of those students entering the program with a B.S. must include at least 24 course credits at the 700 level. The 36 credits required of those students entering the program with an M.S. degree must include at least 12 course credits at the 700 level. In both cases the 700-level courses must include GEOL 701; remaining courses may be at the 600 or 700 level. Although more course work and dissertation credits may be taken, only 12 credits of GEOL 799, and 48 course credits for those entering the program with a B.S. or 24 course credits for those entering the program with an M.S. will be counted toward the degree program.

Doctoral students are encouraged to take courses from outside of geoscience; however, a minimum of 15 credits must be geoscience (GEOL) courses. A maximum of three credits of Independent Study (GEOL 793) are permitted, except in special circumstances in which case permission from the doctoral advising committee, the department Graduate Coordinator and the department chair is required.

A dissertation advisor should be chosen by the end of the first semester, and the doctoral advising committee should be appointed prior to the beginning of the third semester. An approved graduate degree program should be filed prior to the beginning of the third semester of enrollment. Students may request a maximum of 15 graduate credits taken at UNLV prior to admission be included in the graduate degree program, providing those credits were not used to fulfill undergraduate requirements and a grade of B (3.00) or higher was achieved.

A typical Ph.D. student will spend four years completing the required course work and research, and the department and advisor will strive to provide four academic years of support. During this time, the student must be a teaching assistant or instructor for at least one semester.

Satisfactory progress toward meeting the degree requirements is required of all candidates. Satisfactory progress is defined as, at minimum:

1. Maintenance of at least a 3.00 grade point average in all graduate-level courses. Two grades of B- are permitted in the degree program as long as the GPA remains at or above 3.00. One grade of C+ or lower results in academic probation even if the overall GPA is above 3.0. Two grades of C+ or lower will result in automatic suspension from the program.

2. Selecting a dissertation advisor and committee. The advisor must be selected before the end of the first semester and the committee before the beginning of the third semester.
3. Scheduling of a diagnostic interview with the advisor either during or before the first semester. If an advisor is not selected, a temporary advisor will be assigned by the graduate coordinator. The purpose of the interview is to design the student's degree program and develop a list of recommended courses.
4. Preparation of a dissertation proposal and satisfactory performance on a Proposal Defense Examination. This examination must be completed prior to the end of the third semester. The Proposal Defense Examination focuses on the dissertation proposal and the student's ability to perform the research. It includes a formal oral presentation of the student's dissertation proposal, research to date, and questions by the dissertation advisory committee on the dissertation topic. The Proposal Defense Examination is to be taken prior to the Comprehensive Examination.
5. Satisfactory performance on the Comprehensive Examination. Ph.D. students must have a basic knowledge of Physical Geology in addition to a comprehensive knowledge of three fields of geosciences (see Department of Geoscience Graduate Student Guidelines for recommended fields for each Ph.D. Emphasis). The format and content of the exam will be determined by the student's doctoral advisory committee with approval of the department graduate coordinator. The Comprehensive Examination will be taken either the semester after all course work is completed or before the end of the fifth semester, whichever ever comes first. The examination will be oral. In exceptional circumstances, as determined by the student's dissertation committee and the graduate coordinator, the examination will consist of both oral and written components. Students who fail to pass the Comprehensive Examination or Proposal Defense on the first attempt must successfully complete a second examination (as specified by the doctoral advisory committee) within the next six months to remain in the program. Students who entered the program with a baccalaureate degree and who fail the second examination may be allowed to continue as a Master of Science student with the consent of the doctoral advising committee. Students who entered the program with a master's degree who fail the examination a second time will be separated from the program. A student who has successfully passed both the Proposal Defense and Comprehensive Examinations will be admitted to candidacy for the Ph.D. degree.
6. Satisfactory performance on a final examination will consist of the presentation and defense of the dissertation research. The defense will consist of an oral presentation open to the public, a short period of questions from the public, and a closed session of questions from the doctoral advising committee. Any graduate faculty member may attend the closed session of the defense.

Emphasis in Geology

The emphasis in Geology includes the fields of economic geology, environmental geology, geochemistry, geochronology, geomorphology, igneous petrology, paleontology, metamorphic petrology, Quaternary geology, pedology, sedimentology, stratigraphy, structural geology, surficial processes, tectonics, and volcanology. Students must satisfy all of the general degree and admission requirements in addition to those listed below.

Admission requirement in addition to those listed above for the Master of Science and Ph.D. degrees:

1. A bachelor's degree in geology or equivalent. A Master of Science degree in geology or equivalent is recommended for the Ph.D. applicants, but not required.

Emphasis in Geophysics

Admission requirements in addition to those listed above for the Master of Science and Ph.D. degrees:

1. A bachelor's degree in geology, engineering, physics or mathematics. A Master of Science degree is recommended for Ph.D. applicants, but not required.
2. To be admitted to the program with a Geophysics emphasis, it is recommended that the student have completed the following courses for unconditional admission to the program.

Mathematics: Three semesters of calculus

Physics: Two semesters of introductory (calculus level) physics

Geology: Physical geology, historical geology, mineralogy, structural geology, stratigraphy/ sedimentology, and igneous and metamorphic petrology.

Degree requirements in addition to those listed above for the Master of Science and Ph.D. degrees.

Required Graduate Courses:

GEOL 645 Geophysical Methods (4)
or
CEG 636 Engineering Geophysics (3)
ECG 780 Digital Signal Processing (3)
or
GEOL 793 Independent Study – DSP (3)

In addition, each student must take at least three courses from the list below. The remaining credits can be obtained from the list below or other Geoscience graduate level-courses that are appropriate for the course of study.

Elective Graduate Courses:

GEOL 630 Geographic Information Systems (GIS):
Theory and Applications (4)
GEOL 643 Plate Tectonics (3)
GEOL 644 Tectonics of Orogenic Belts (3)
GEOL 646 Geologic Applications in Remote Sensing (3)
GEOL 716 Geostatistics (3)
GEOL 744 Tectonics and Structures (3)
GEOL 745 Advanced Structural Geology (3)
GEOL 746 Strain and Microstructural Analysis (4)

- GEOL 747 Geological Evolution of Western North America (3)
- GEOL 770 Sedimentary Basins (3)
- GEOL 772 Reflection Seismic Data Interpretation (4)
- GEOL 773 Seminar in Geophysics (1-3)
- CEG 634 Rock Mechanics (3)
- CEG 681 Earthquake Engineering (3)
- CEG 737 Soil Dynamics & Earthquake Engineering (3)
- CEG 775 Seismic Response of Structures (3)

Emphasis in Soil Science

Admission requirements in addition to those listed above for the Master of Science and Ph.D. degrees:

1. A B.S. degree in a Natural Science (or similar field and course work) or B.A. degree in Natural Science (or similar field and course work) with approval of the graduate coordinator. A Master of Science degree is recommended for Ph.D. applicants, but not required.
2. To be admitted to the program with a Soil Science emphasis, it is recommended that the student have completed two of the following courses for unconditional admission to the program: Mineralogy, Geomorphology, Sedimentology/Stratigraphy, or Geochemistry.

Degree requirements in addition to those listed above for the Master of Science and Ph.D. degrees.

Required Graduate Courses:

- GEOL 610 Soil Classification and Resource Management (4)
- GEOL 786 Soils Applications: Paleoclimate, Neotectonics, Archaeology (3)

Remaining credits can be obtained from the list below or other graduate-level courses that are appropriate for the course of study and approved by the student's committee.

Elective Graduate Courses:

- GEOL 630 Geographic Information Systems (GIS): Theory and Applications (4)
- GEOL 646 Geologic Applications in Remote Sensing (3)
- GEOL 690 Microtechniques in Geoscience (3)
- GEOL 712 Watershed Hydrology (3)
- GEOL 716 Geostatistics (3)
- GEOL 719 Introduction to Vadose Zone Hydrology (3)
- GEOL 735 Seminar in Environmental Geology (3)
- GEOL 740 Arid Zone Soils (3)
- GEOL 744 Tectonics and Structures
- BIO 745 Arid Zone Soils (3)
- BIO 755 Microbial Ecology (4)
- GEOL 760 Advanced Spatial Modeling with GIS (4)
- GEOL 770 Sedimentary Basins (3)
- GEOL 776 Paleosols: Records of Past Landscapes (3)

Emphasis in Hydrogeology

Admission requirements in addition to those listed above for the Master of Science and Ph.D. degrees:

1. B.S. or master's degree in geology or a related discipline (e.g., civil engineering). A Master of Science degree is recommended for Ph.D. applicants, but not required.
2. To be admitted to the program with a hydrogeology emphasis, it is required that the student have completed four of the following courses (or their equivalents) for unconditional admission to the program:
 - GEOL 474 Hydrogeology
 - GEOL 330 Geochemistry
 - GEOL 333 Geomorphology
 - GEOL 341 Structural Geology
 - GEOL 348 Field Geology
 - GEOL 462 Stratigraphy and Sedimentology

Degree requirements in addition to those listed above for the Master of Science and Ph.D. degrees.

Elective Graduate Courses

Course credits can be obtained from the list below or other graduate level courses that are appropriate for the course of study and approved by the student's committee.

- GEOL 630 Geographic Information Systems (GIS): Theory and Applications
- GEOL 646 Geologic Applications in Remote Sensing
- GEOL 674 Hydrogeology
- GEOL 675 Hydrogeochemistry
- GEOL 709 Hydrologic Techniques
- GEOL 711 Hydrology
- GEOL 712 Watershed Hydrology
- GEOL 715 Advanced Hydrogeology
- GEOL 716 Geostatistics
- GEOL 719 Vadose Zone Hydrology
- GEOL 740 Arid Zone Soils
- GEOL 744 Tectonics and Structures
- GEOL 760 Advanced Spatial Modeling with GIS
- GEOL 765 Seminar in Stratigraphy
- GEOL 785 Seminar in Sedimentology
- GEOL 792 Seminar in Hydroscience

Geoscience

GEOL 701 3 credits Research Methods in Geoscience

Discussion of the processes of scientific research and research design as applied to modern geoscience. Includes scientific approaches to field and laboratory research, research and professional ethics, writing, and public presentation. Model thesis prospectus and grant proposals prepared. Required weekend field trips familiarize students with the local geology. Prerequisite: Graduate standing or consent of instructor.

GEOL 707 **Stable Isotope Geochemistry** **3 credits**

Investigates stable isotopes in the hydrologic and geologic cycles, and their use as tracers in paleoclimatology, hydrogeology, and oceanography. Theory and research applications of stable isotopes in geologic, biologic, water, and atmospheric samples, including carbon, oxygen, hydrogen, nitrogen, strontium, and sulfur isotopes. Prerequisite: Geochemistry.

GEOL 708 **Radiogenic Isotope Geochemistry** **3 credits**

Principles of radiogenic isotope geochemistry as a monitor of geochemical processes in the mantle, lithosphere and hydrosphere; applications to petrology, tectonics, economic geology, marine geology and paleoclimatology. Prerequisites: GEOL 330, GEOL 426, MAT 181 or equivalent, or consent of instructor.

GEOL 709 **Hydrologic Techniques** **3 credits**

Field and laboratory data and sample collection concerning ground water and surface water quality and quantity.

GEOL 710 **Igneous Petrology** **4 credits**

Origin of igneous rocks, relation of magma types to tectonic settings, physical properties of magmas, application of trace elements and isotopes to petrogenesis, modeling of crystal fractionation and partial melting, phase diagrams. Six hours laboratory. Prerequisite: GEOL 325 or equivalent or consent of instructor.

GEOL 711 **Principles of Hydrology and Hydraulics** **3 credits**

Consideration of modern concepts of hydrology and hydraulics. Includes coverage of statistical methods of analysis, unsteady flow, channel design, modeling and simulation, urban hydrology, and design of hydraulic structures. Prerequisite: Consent of instructor.

GEOL 712 **Watershed Hydrology** **3 credits**

Concepts and processes controlling water movement and distribution within the watershed; analysis techniques for understanding watershed dynamics; numerical simulation of various watershed-scale hydrologic processes. Prerequisite: Consent of instructor.

GEOL 715 **Advanced Hydrogeology** **4 credits**

Advanced concepts used in ground water investigations, including flow system analysis, resource evaluation, exploration, development, and monitoring. Prerequisite: GEOL 674.

GEOL 716 **Geostatistics** **3 credits**

Analysis of the spatial and temporal variations in geologic, hydrologic and geochemical data, including derived distributions, time series analysis, correlation and spectral analysis, interpolation techniques, cluster analysis and sensitivity and uncertainty techniques. Prerequisites: STA 491 or 691 (or equivalent) or consent of instructor.

GEOL 719 **Vadose Zone Hydrology** **3 credits**

Basic physical properties of soils and water and the physical principles governing the soil-water system. Modeling the transport of moisture and chemicals in unsaturated soil with applications to practical field problems. Prerequisite: GEOL 674.

GEOL 720 **Advanced Geochemistry** **4 credits**

Contemporary geochemistry applied to igneous, metamorphic, and sedimentary rocks, economic mineral deposits, and problems of the origin of the Earth and other terrestrial planets. Six hours laboratory. Prerequisite: Graduate standing or consent of instructor.

GEOL 725 **Seminar in Petrology** **3 credits**

Analysis of current problems, concepts, and research in petrology and closely related fields. Prerequisite: Graduate standing or consent of instructor.

GEOL 727 **Metamorphic Petrology** **4 credits**

Application of field studies, petrography, mineralogy, phase equilibria, and isotopic methods to the study of metamorphic rocks and crustal evolution; explores relationships among metamorphism, tectonics and thermal evolution of the crust. Three hours lecture, three hours laboratory. Prerequisites: GEOL 429/629 or equivalent and graduate standing, or consent of instructor.

GEOL 730 **Seminar in Quaternary Studies** **3 credits**

Evaluation of current methodology focused on solving problems of Quaternary chronology, geomorphic processes, and environmental reconstruction. Emphasis on pluvial and post-pluvial environments of the western United States, the evolution of landforms and the development of stratigraphic units and surficial geology originating during the past three million years. Prerequisite: Graduate standing or consent of instructor.

GEOL 735 **Seminar in Environmental Geology** **3 credits**

Application of basic geologic concepts to environmental problems: emphasis on geologic hazards, waste disposal, urban planning, resource policy issues, and environmental programs. Prerequisite: GEOL 672 or equivalent or consent of instructor.

GEOL 740 **3 credits**
Arid Zone Soils

(Same as BIO 745.) The role soils have in the soil-plant-atmospheric continuum of arid regions, influence of arid zone soils on all aspects of plant growth and development, influence of soil forming factors on the development of arid soils. Prerequisites: Consent of instructor.

GEOL 742 **3 credits**
Seminar in Volcanology

Analysis of current problems, concepts, and research in volcanology and closely related fields. Prerequisite: Graduate standing or consent of instructor.

GEOL 743 **3 credits**
Seminar in Planetary Geology

Analysis of current problems, concepts, and research in planetary geology with emphasis on newly available data. Prerequisite: Graduate standing or consent of instructor.

GEOL 744 **3 credits**
Tectonics and Structures

Analysis of upper crustal deformation with emphasis on faulting, neotectonics and seismic interpretation; includes a group research project with field and literature data collection, analysis and results suitable for presentation at a professional conference. Prerequisite: Consent of instructor.

GEOL 745 **3 credits**
Advanced Structural Geology

Analysis of deformation of the Earth's crust with emphasis on deformation mechanisms operative in rocks at different crustal levels; the geometry, kinematics, and dynamics of common geological structural associations, and mechanism and styles of deformation in orogenic belts. Three hours lecture per week. Prerequisites: GEOL 341 and GEOL 349.

GEOL 746 **4 credits**
Strain and Microstructural Analysis

Examination of the principles and techniques of finite and incremental strain analysis and their application to naturally deformed rocks. Investigation of plastic deformation processes and deformation mechanisms, and recognition and interpretation of microstructures developed during deformation. Three hours lecture, three hours laboratory. Prerequisite: GEOL 341 or consent of instructor.

GEOL 747 **3 credits**
Geological Evolution of Western North America

Study of the geological evolution of western North America. Emphasis on the stratigraphic, structural, and tectonic development of the continent within the framework of plate tectonics. Three hours lecture per week. Prerequisites: GEOL 223, GEOL 341, GEOL 462.

GEOL 749 **3 credits**
Advanced Geochronology and Thermochronology

Detailed discussion of isotopic dating of rocks with application to geologic problems. Diffusion theory and reconstruction of thermal histories of rocks. Includes surface exposure dating using cosmogenic isotopes, study of uranium series disequilibrium, luminescence, electron spin resonance, and ¹⁴C dating. Prerequisite: GEOL 426.

GEOL 750 **3 credits**
Seminar in Paleobiology

Fossil record as a tool for understanding evolutionary processes, early history of life, eruptive radiation, mass extinction, macroevolution, and origin of higher taxa. Prerequisite: Graduate standing in geology or biology or consent of instructor.

GEOL 755 **3 credits**
Seminar in Paleontology

Special topics of current interest in paleontology, with emphasis on Great Basin fossil faunas. Prerequisite: Graduate standing in geology or biology or consent of instructor.

GEOL 760 **4 credits**
Advanced Spatial Modeling with GIS

Advanced study in computer-based techniques for storage, retrieval, analysis, and representation of spatially referenced data. Emphasis on development of spatially distributed models in the geosciences using Geographic Information System (GIS) technology. Students required to develop system models in their chosen thesis area. Prerequisite: GEOL 430 or GEOL 630. Three hours lecture and three hours lab.

GEOL 762 **3 credits**
Geological Applications of Computers

Use of computer algorithms to solve geological problems, geostatistics, modeling of geological processes. Prerequisites: Graduate standing and CS 116 and 169.

GEOL 765 **3 credits**
Seminar in Stratigraphy

Special topics in stratigraphy with emphasis on southern Nevada and adjacent regions. Prerequisite: Graduate standing or consent of instructor.

GEOL 770 **3 credits**
Sedimentary Basins

Analysis of current ideas concerning the plate tectonic setting and evolution of sedimentary basins. Emphasis on characteristic styles of basin sedimentation and resulting stratigraphic framework, provenance of basin fill, chronologic relationship of tectonic events and sedimentation, and methods of basin analysis. Prerequisite: Graduate standing or consent of instructor.

GEOL 772 **4 credits**
Reflection Seismic Data Interpretation

Fundamentals of geologic interpretation using seismic reflection data. Introduction to seismic data acquisition and processing. Interpretation techniques include well log to seismicities, contour maps and time-to depth conversion. Interpretation of data from different structural settings, seismic stratigraphy, and 3-D seismic interpretation. Three hour lecture and three hour lab. Prerequisites: Graduate standing or consent of instructor.

GEOL 772L **0 credits**
Reflection Seismic Data Interpretation Laboratory

Lab course designed to supplement the lecture course. Interpretations of several structural regimes, structure contour maps, correlation using well logs, creation of synthetics, and the interpretation of a 3-D seismic data set. Prerequisites: Graduate standing or consent of instructor.

GEOL 773 **1-3 credits**
Seminar in Geophysics

Specialized topics in geophysics with an emphasis on current analysis techniques and problems. Prerequisites: Graduate standing or consent of instructor.

GEOL 775 **3 credits**
Seminar in Economic Geology

Analysis of current problems, concepts and research in economic geology and closely related fields. Prerequisite: GEOL 677 or equivalent or consent of instructor.

GEOL 776 **3 credits**
Paleosols Records of Past Landscapes

Recognition and analysis of soil horizons preserved in the rock record. Use of paleosols for reconstructing paleoclimates, tectonics, depositional environments, and other aspects of geologic history. Prerequisites: Graduate standing and GEOL 462 (or equivalent) or consent of instructor.

GEOL 777 **3 credits**
Instrumental Techniques in Geology

Use of modern instrumentation to acquire geological and geochemical data. Includes, but not limited to, the practical application of x-ray diffraction and fluorescence and atomic absorption spectrophotometry. Six hours laboratory. Prerequisite: Graduate standing or consent of instructor.

GEOL 779 **3 credits**
Theory of Ore Deposition

Study of physical and chemical processes which contribute to metal solubility, transport, and precipitation. Includes fundamental geochemical and thermodynamic concepts as they apply to ore and gangue mineral stability under various geologic conditions. Prerequisites: GEOL 426 and GEOL 477.

GEOL 780 **3 credits**
Terrigenous Depositional Systems

Examination of modern nonmarine and marine depositional environments dominated by terrigenous sediments, processes that operate in these settings, and responses of sediment to processes. Establish criteria for recognizing these environments and processes in ancient terrigenous sequences. Prerequisites: Graduate standing and GEOL 462 or consent of instructor.

GEOL 781 **3 credits**
Carbonate Depositional Systems

Examination of modern non-marine and marine depositional environments dominated by carbonate sediments, organisms that produce sediments, processes that operate in these settings, and responses of sediment to the processes. Establish criteria for recognizing these environments and processes in ancient carbonate sequences. Prerequisites: Graduate standing and GEOL 462 or consent of instructor.

GEOL 782 **4 credits**
Sandstone Petrology

Description, classification, and interpretation of terrigenous sedimentary rocks. Emphasis on petrographic methods applied to sandstones and interpretation of provenance of sedimentary sequences. Prerequisite: GEOL 780 (corequisite) or consent of instructor.

GEOL 783 **4 credits**
Carbonate Petrology

Study of the physical and chemical factors important in the genesis and diagenesis of carbonate sediments and rocks. Various analytical techniques covered, with emphasis on thin section petrography for deciphering rock components and diagenesis. Prerequisite: GEOL 781 (corequisite) or consent of instructor.

GEOL 785 **1-4 credits**
Seminar in Sedimentology

Analysis of current problems, concepts, and research in sedimentary geology and related fields. Emphasis may be upon the genesis and diagenesis of specific sedimentary sequences or upon particular depositional or diagenetic environments. Prerequisites: Graduate standing and either GEOL 780 or GEOL 781, or consent of instructor.

GEOL 786 **3 credits**
Soils Applications: Paleoclimate, Neotectonics, Archeology

Special topics of current interest in soil science with emphasis on the use of soils for applications in geomorphology, paleoclimate, neotectonics, and/or archeology. Prerequisites: Graduate standing in geology, biology, anthropology, or consent of instructor.

GEOL 787 **1-6 credits**
Thesis Research

Supervised research prior to approval of master's program prospectus. May be repeated to a maximum of six credits, but only one credit can be applied to the student's program. S/F grading only. Prerequisite: Enrollment in the M.S. program.

GEOL 789 **1-6 credits**
Dissertation Research

Supervised research prior to advancement to candidacy in the doctoral program. May be repeated, but only two credits can be applied to the student's program. S/F grading only. Prerequisite: Enrollment in the doctoral program.

GEOL 792 **1-3 credits**
Seminar in Hydroscience

Specialized topics in hydroscience.

GEOL 793 **1-3 credits**
Independent Study and Research

Independent study and research projects in some field of geology. Proposed project for study must be submitted in writing to the graduate program coordinator and the department chair for approval and credit evaluation at least two weeks prior to registration. May be repeated for credit, but only three credits are permitted per instructor unless special permission is received. Prerequisite: Consent of instructor.

GEOL 795 **1 credit**
Poster Presentation and Time Management

Presentation of geological information in poster format and time management skills. Poster presentation includes layout and design, focus, data versus interpretation, computer graphics, verbal presentation and referencing. Time management issues include scheduling, planning, organization, and productivity. Should be taken during first or second semester of graduate program. Prerequisite: Graduate standing in Geoscience.

GEOL 796 **1-3 credits**
Advanced Topics in Geoscience

Variety of advanced studies of current and/or topical interest in specialized areas of geoscience. May be repeated to a maximum of six credits. Prerequisite: Varies, depending upon the specific topic.

GEOL 797 **1-6 credits**
Thesis

May be repeated, but only six credits applied to the student's program. S/F grading only. Prerequisites: Graduate standing and consent of instructor.

GEOL 799 **3-6 credits**
Dissertation

Research analysis and writing toward completion of dissertation and subsequent defense. Twelve credits are required for the degree, may be repeated, but only twelve credits will be applied to the student's degree program. Prerequisite: Successful completion of qualifying examination and approval by department. May be repeated but only a maximum of 12 credits may be used in students degree program S/F grade.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600-level normally requires additional work.

- GEOL 610 Soil Classification and Resource Management
- GEOL 620 Introduction to X-ray Diffraction and X-ray Spectrometry Methods
- GEOL 629 Geochemical Thermodynamics and Kinetics
- GEOL 630 Geographic Information Systems (GIS): Theory and Applications
- GEOL 633 Glacial and Periglacial Geology
- GEOL 634 Quaternary Geology
- GEOL 636 Quaternary Paleocology
- GEOL 637 Paleoclimatology
- GEOL 640 Volcanology
- GEOL 643 Plate Tectonics
- GEOL 644 Tectonics of Orogenic Belts
- GEOL 645/645L Geophysical Methods
- GEOL 646/646L Geologic Applications in Remote Sensing
- GEOL 649 Geochronology
- GEOL 671 Petroleum Geology
- GEOL 672 Environmental Geology
- GEOL 674 Hydrogeology
- GEOL 675 Hydrogeochemistry
- GEOL 677 Geology of Metallic Ore Deposits
- GEOL 690 Microtechniques in Geoscience

Mathematical Sciences

Chair

Ananda, Malwane M.A. (1990), Professor; B.S., University of Sri Jayewardenepura; M.S., Ph.D., Purdue University.

Graduate Coordinator

Miel, George, J. (1977 & 1991), Professor; B.S., M.S., University of Illinois; Ph.D., University of Wyoming.

Graduate Faculty

Aizley, Paul (1968), B.A., Harvard University; M.S., University of Arizona; Ph.D., Arizona State University.

Bachman, Gennady (1991), Associate Professor; B.A., Temple University; Ph.D., University of Illinois.

Baragar, Arthur (1997), Assistant Professor; B.S., University of Alberta; Ph.D., Brown University.

Bellomo, Carryn (2003), Assistant Professor; B.S., M.S., Ph.D., Old Dominion University.

Bhatnagar, Satish C. (1974) Professor; B.A., M.A., Panjab University, India; Ph.D. Indiana University.

Burke, Douglas (1994), Associate Professor; B.S., University of Wisconsin, Madison; M.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.

Catlin, Sandra (1997), Assistant Professor; B.A., University of California, Berkeley; M.S., Ph.D., University of Washington.

Chen, Ching-Shyang (1988), Professor; B.S., National Cheng-Kung University; M.S., University of Southern Mississippi; Ph.D., University of Southwestern Louisiana.

Cho, Hokwon (1999), Assistant Professor; B.A., Korea University; M.A., Ph.D., University of California, Santa Barbara.

Costa, David (1993), Professor; B.S., Federal University of Pernambuco, Recife, Brazil; Ph.D., Brown University.

Dalpatadu, Rohan (1985), Associate Professor; B.S., University of Ceylon; M.S., Ph.D., Southern Illinois University at Carbondale.

Ding, Zhonghai (1995), Professor; B.S., Nanjing Institute of Technology; M.S., Institute of Systems Science; Ph.D., Texas A&M University.

DuBose, Derrick A. (1987), Associate Professor; B.A., California State University, Long Beach; M.A., Ph.D., University of California, Los Angeles.

Ho, Chih-Hsiang (1988), Professor; B.S., National Central University; M.S., New Mexico Highlands University; M.S., Ph.D., University of Minnesota.

Kern, Daniel (2003), Assistant Professor; B.S., College of William and Mary; M.S., University of Massachusetts, Amherst; Ph.D., University of Illinois, Chicago.

Li, Jichun (2000), Assistant Professor; MSBS Nanjing University, China; Ph.D., Florida State University.

Li, Xin (1992), Associate Professor; B.S., M.S., Jilin University, Changchun; Ph.D., Texas A&M University.

Marcozzi, Michael (1997), Assistant Professor; B.S., M.S., Ph.D., University of Delaware.

Mulshkov, Angel (1989), Associate Professor; M.S., Ph.D., University of Washington.

Phanord, Dieudonne D. (2002), Professor and Head; B.S., Gordon College; M.S., Ph.D., University of Illinois, Chicago.

Salehi, Ebrahim (1985), Associate Professor; B.S., University of Tehran; M.S., Institute of Mathematics, Tehran; M.S., Ph.D., University of Washington.

Schultz, Michelle (1996), Assistant Professor; B.S., M.A., Ph.D., Western Michigan University.

Shiue, Peter (1985), Professor; B.S., National Taiwan Normal University; M.S., Ph.D., Southern Illinois University.

Singh, Ashok (1991), Professor; B.S., M.S., Lucknow University; Ph.D., Purdue University.

Tehrani, Hossein (1997), Assistant Professor; B.S., Sharif University of Technology; M.S., Ph.D., Courant Institute of Mathematical Sciences.

Webster, Corran (1999), Assistant Professor; B.S., University of New South Wales; M.A., Ph.D., University of California, Los Angeles.

Wells, William R. (1986), Professor; B.S., Georgia Institute of Technology; M.S., Virginia Polytechnic Institute; M.A. Harvard University. Ph.D., Virginia Polytechnic Institute

Professors Emeriti

Bowman, Harold (1972-1999), Emeritus Associate Professor; B.E.E., City College of New York; M.A., Oklahoma University; Ph.D., Arizona State University.

Graham, Malcolm (1956-1985), Emeritus Professor; B.S., New Jersey State College; M.S., University of Massachusetts; Ed.D., Columbia University.

Nietling, Lloyd (1967-1992), Emeritus Associate Professor; B.A., St. Mary of the Plains College; B.S., Aquinas College; M.A., University of Michigan; Ph.D., Ohio State University.

The Department of Mathematical Sciences offers both the Master of Science and Doctor of Philosophy degrees. The M.S. program has areas of concentration in Pure Mathematics, Applied Mathematics, Applied Statistics, and Teaching Mathematics. The Ph.D. program has areas of concentration in Applied Mathematics, Computational Mathematics, Pure Mathematics, and Statistics. Specific disciplines include algebra, complex analysis, differential equations, foundations of mathematics, number theory, numerical analysis, real analysis, statistics and topology. Excellent computing facilities are available for classroom studies and research. The Department of Mathematical Sciences, through an active faculty, offers graduate students both an unusual amount of personal attention and a lively research atmosphere. The degree programs are designed to provide students with a strong theoretical background in graduate-level mathematics. Our graduates have been successful in finding employment in industry, government and education.

Admission Requirements for the Master of Science

Admission to the M.S. Program in Mathematical Sciences requires, in addition to the Graduate College admission requirements, that a student has completed a bachelor's degree with 18 upper-division credits in mathematics. To apply for admission to the M.S. Program prospective students must submit application material to both the Graduate College and the Department of Mathematical Sciences. First, applicants must submit the following material:

- a. A completed application form.
- b. Official transcripts from all colleges and universities the student has attended.
- c. Recommended: Official scores from the GRE Aptitude and GRE Subject Test in Mathematics.

- d. If interested: A completed application for a Graduate Assistantship to the Graduate College; additionally, international students must submit a completed financial statement and show competency in English (a TOEFL score of 550 or comparable evidence).

Second, applicants must submit the following material:

- a. Copies of all transcripts sent to the Graduate College.
- b. At least two letters of recommendation from persons familiar with the applicant's academic record and potential for advanced study in the mathematical sciences.
- c. A Statement of Purpose describing the aim in applying for graduate study, the particular area of specialization within the mathematical sciences (if known), and any additional information that may aid the selection committee in evaluating preparation and aptitude for graduate study.
- d. Recommended: Copies of GRE Aptitude and Subject scores to the Graduate Coordinator of the Department of Mathematical Sciences. Details of the admission procedure for the M.S. Program can be found on the department's web site.

Degree Requirements for the Master of Science

A minimum of 30 credits of graduate work is required for the M.S. in Mathematical Sciences, including at least 27 hours of course work. For the Pure Mathematics, Applied Mathematics, or Applied Statistics concentrations, at least 18 of the 27 credits must be at the 700 level. For the Teaching Mathematics Concentration, at least 15 of the 27 credits must be at the 700 level. A grade point average of 3.00 is required in all courses that are part of the degree program. The following specific requirements must be met:

Pure Mathematics Concentration

1. Core Requirement: Six credits of analysis drawn from MAT 707, 708, 709, 710, 771, 772, and three credits of algebra at the 700 level.
2. Six credits in a field of special interest to the student at the 700 level, exclusive of those used to meet the core requirement.
3. Six credits for thesis or an additional six credits of MAT courses at the 700 level.
4. Final Examination: This will be either an examination to defend the thesis or a written comprehensive examination based on requirements 1 and 2.

Applied Mathematics Concentration

1. Core Requirement: Six credits of analysis drawn from MAT 707, 708, 709, 710, 771, 772 and three credits of numerical analysis drawn from MAT 663, 765, 767.
2. Six credits of analysis and applied mathematics at the 700 level, exclusive of those used to meet the core requirement.
3. Six credits of thesis or an additional six credits of MAT or STA courses at the 700 level.
4. Final Examination: This will be either an examination to defend the thesis or a written comprehensive examination based on requirements 1 and 2.

Applied Statistics Concentration

1. Core Requirement: Twelve credits consisting of Mat 657, MAT 663, STA 667, STA 767.
2. Area of Specialization: Six credits in the selected area of specialization as follows:
 - a. Applied Statistics: STA 763, 765
 - b. Environmental Statistics: STA 751, 769
3. Six credits for thesis or an additional six credits of STA courses at the 700 level in the appropriate area of specialization.
4. Final Examination: This will be either an examination to defend the thesis or a written comprehensive examination based on requirements 1 and 2.

Note: STA 713 and STA 715 do not count toward an M.S. degree in Mathematics.

Teaching Mathematics Concentration

1. Mathematics Requirement: A total of 18 credits including nine credits from MAT 711, 712, and 714; three credits in algebra selected from 653, 654, 703, 704, 655, 669, 670; three credits in analysis selected from 657, 658, 707, 708, 659, 709, 710, 687, 665; and three credits in foundations selected from 651, 652, 701, 702, 680, 683, 684.
2. Education Requirement: Six credits in education from CIS 722 or CIS 724 and from CIG 720.
3. Three credits for a course in MAT, STA, CIS or CIG at the graduate level.
4. Three credits for an additional three credits of MAT or STA at the graduate level or six credits for thesis.
5. Final Examination: This will be either an examination to defend the thesis or a professional paper or an oral presentation addressing an appropriate area of specialization in mathematics.

Note: MAT 711 and 712 do not count as credit toward a Master of Science in Mathematical Sciences degree with concentration in pure mathematics, applied mathematics or applied statistics.

Admission Requirements for the Doctor of Philosophy

In addition to the requirements of the Graduate College, applicants must satisfy the admission requirements of the Department of Mathematical Sciences summarized as follows. Applicants must have a minimum grade point average of 3.00 for all undergraduate work or a minimum 3.25 grade point average for the last two years of undergraduate work. In addition, applicants seeking direct admission to the doctoral program without a previously earned Master of Science degree must have a minimum GPA of 3.00 for all undergraduate work or an overall 3.25 GPA for the last two years of mathematics undergraduate work. Applicants with a master's degree must have an overall 3.00 GPA in their master's program and at least 15 credit hours of graduate level course work in Mathematical Sciences with a grade of B or better. Applicants must also submit official scores from the GRE General Test; successful applicants to the program are expected to have GRE scores among the upper 50th percentile of examinees taking the General GRE Test. To apply for admission to the Ph.D. Program

prospective students must submit application material to both the Graduate College and the Department of Mathematical Sciences. First, applicants must submit the following material:

- a. A completed application form.
- b. Official transcripts from all colleges and universities the student has attended.
- c. Official score from the GRE General Test.
- d. If interested: A completed application for a Graduate Assistantship to the Graduate College; additionally, international students must submit a completed financial statement and show competency in English (a TOEFL score of 550 or comparable evidence).

Second, applicants must submit the following material:

- a. Copies of all transcripts sent to the Graduate College.
- b. Three letters of recommendation from persons familiar with the applicant's academic record and potential for doctoral study in the mathematical sciences.
- c. A Statement of Purpose describing the aim in applying for doctoral study, the desired area of specialization within the mathematical sciences, and any additional information that may aid the selection committee in evaluating preparation and aptitude for advanced study.
- d. Copy of the GRE General Test score to the Graduate Coordinator of the Department of Mathematical Sciences. Details of the admission procedure for the Ph.D. Program can be found on the department's web site.

Degree Requirements for the Doctor of Philosophy

1. **Proficiency.** After admission to the doctoral program, each student must demonstrate proficiency in the subject matter of the following three courses:
 - a. MAT 657: Introduction to Real Analysis
 - b. MAT 663: Advanced Matrix Theory and Application
 - c. STA 667: Introduction to Mathematical Statistics

Each of the three parts of this requirement can be satisfied by earning a B or better grade in the course or by passing a proficiency exam on the course. The Department's Graduate Studies Committee in consultation with the Chair of the Department will rule on whether equivalent courses taken at another institution can count toward this entrance requirement. For students who take one or more of these courses, or who have taken equivalent courses at another institution, a maximum of 3 credits for students with a master's degree or a maximum of 6 credits for students with a baccalaureate can be counted toward the 60 credits total required for completion of the program.

2. **Credit requirement.** Doctoral students are required to complete a minimum of 60-credit hours beyond the baccalaureate, at least 36 of which must be in courses at the 700-level. For students entering the program with an M.S. degree, at least 30 credit hours must be completed at UNLV and at least 18 credit hours must be at the 700-level. Each doctoral student must complete a dissertation embodying the results of original research which is acceptable to the student's dissertation committee.

Normally, a student will enroll in a minimum of 24 hours and a maximum of 36 hours of Dissertation/Research.

3. **Qualifying Examination.** The purpose of the Qualifying Examination is to measure the student's knowledge of basic graduate level coursework in selected areas and to make sure that the student is prepared to proceed to more advanced studies. The student will take a Qualifying Examination, usually within the second year, based on specified core courses in the student's concentration. For each concentration, these core courses are:

Applied Mathematics

MAT 707 Real Analysis I
 MAT 709 Complex Function Theory I
 MAT 771 Applied Functional Analysis I
 Elective #1
 Elective #2

Computational Mathematics

MAT 707 Real Analysis I
 MAT 709 Complex Function Theory I
 MAT 765 Advanced Numerical Analysis I
 MAT 766 Advanced Numerical Analysis II
 Elective #1

Pure Mathematics

MAT 703 Abstract Algebra III
 MAT 707 Real Analysis I
 MAT 709 Complex Function Theory I
 Elective #1
 Elective #2

Statistics

STA 715 Multivariate Statistical Methods
 STA 763 Regression Analysis
 STA 767 Advanced Mathematical Statistics
 STA 765 Statistical Decision Theory
 Elective #1

Students who fail the Qualifying Examination on the first attempt must complete a second examination within the next twelve months. Students who entered the program with a baccalaureate degree and who fail the second examination may be allowed to complete a Master of Science in Mathematical Sciences with the consent of the Graduate Studies Committee. To be eligible for the Master of Science the students must fulfill the requirements of the Master of Science degree as stipulated in the Graduate Catalog. Such students will not be permitted to seek readmission to the Doctoral Program in Mathematical Sciences at UNLV. Students who fail the examination a second time and who entered the doctoral program with a master's or other graduate degree will be separated from the program.

4. **Comprehensive Examination.** The purpose of the Comprehensive Examination is to measure the student's knowledge of the advanced level graduate work that will be required as the student begins to do original research in his or her area of concentration. After passing the

Qualifying Examination, the student will engage in approved course work specified by the Doctoral Advising Committee and submit to the latter a dissertation proposal. Usually a year after the Qualifying Examination, the student will complete a Comprehensive Examination, designed and administered by the Doctoral Advising Committee, based on the student's course work with focus on his/her ability to perform research on the dissertation proposal. Students who fail to pass the Comprehensive Examination on the first attempt must complete a second examination within the next semester. Students who fail the examination a second time will be separated from the program. A student who has successfully passed the Comprehensive Examination will be admitted to candidacy for the Ph.D. degree and thereby be allowed to proceed with the approved dissertation proposal.

5. **Dissertation.** In addition to the 60 credits total listed earlier, each doctoral candidate must complete a minimum of 24 hours and a maximum of 36 hours of Dissertation/Research.
6. **Additional Requirements.** Skills in foreign languages, computer programming or interdisciplinary areas, dependent on the concentration of the student's program, will be determined by the Doctoral Advising Committee and the Graduate Study Committee in consultation with the Department Chair.
7. **Dissertation Defense.** The candidate, having submitted to the Doctoral Advising Committee a dissertation draft, previously approved by the Dissertation Advisor, will orally defend the dissertation before said Committee and any other graduate faculty members who wish to attend. The Doctoral Advising Committee will recommend to the Department Chair whether the dissertation and defense are both satisfactory.

Specific degree requirements, including those listed above, are described in detail in the Graduate Student Handbook for the Ph.D. Program, available on the department's web site. The listing of graduate courses is constantly under review. Graduate students will automatically receive new listings. Since some courses are taught on an "on demand" basis, course prerequisites for each of the four concentrations are considered guidelines with courses roughly equivalent accepted as prerequisites, subject to approval of the Graduate Studies Committee and the student's Doctoral Advising Committee.

A student will be placed on academic probation if a minimum 3.00 grade point average is not maintained in all work taken in the degree program. A grade of C or less in one graduate-level course will cause a student to be placed on academic probation and will elicit a critical review of the student's program by the Graduate Studies Committee.

The Graduate College requires a minimum of 50 percent of the total credits required to complete the doctoral degree, exclusive of transferred credits and/or the dissertation, must be earned at UNLV after admission to a graduate degree program.

Mathematical Sciences

MAT 701-702 **3 credits each**

Foundations of Mathematics III and IV

Selection from the following topics: model theory, recursive function theory, set theory, mathematics of metamathematics. Prerequisite: MAT 652.

MAT 703-704 **3 credits each**

Abstract Algebra III and IV

Detailed study of the following algebraic structures: groups, rings and ideals, fields, modules, and Galois theory. Prerequisite: A year of undergraduate abstract algebra or consent of instructor.

MAT 707-708 **3 credits each**

Real Analysis I and II

Theory of measure, integration and differentiation: Banach spaces; Hilbert spaces; spaces of continuous functions. Prerequisite: MAT 658.

MAT 709-710 **3 credits each**

Complex Function Theory I and II

Analytic functions, conformal mappings, Cauchy's theorem, power series, Laurent series, the Riemann mapping theorem, harmonic functions, subharmonic functions, canonical mappings of multiply connected regions, analytic continuation. Prerequisite: MAT 657 or MAT 659 or equivalent.

MAT 711 **3 credits**

Survey of Mathematical Problems I

Selected topics from logical reasoning, probability, combinatorics, graph theory, codes, number theory, constructibility, game theory, limits, functions, set theory and foundations, and plane geometry. Problem solving and techniques of proof emphasized throughout. Connections made between the mathematics of this course and secondary education mathematics. Prerequisites: Graduate standing and consent of instructor.

MAT 712 **3 credits**

Survey of Mathematical Problems II

Continuation of topics listed for MAT 711 with emphasis on problem solving and techniques of proof. Again, connections made between the mathematical content of this course and mathematical content for secondary education. Prerequisites: MAT 711 or consent of instructor.

MAT 714 **3 credits**

History of Mathematics

Historical development of mathematics from primitive origins to the present time. Lives of many mathematicians and their contributions to the development of mathematics. Prerequisites: Graduate standing and consent of instructor.

MAT 723 **3 credits**

Advanced Ordinary Differential Equations I

Functional analysis; Frechet calculus; existence and uniqueness theorems for initial and boundary value problems; qualitative properties of solutions, particularly of linear equations. Prerequisite: MAT 671-672 or MAT 673-674.

MAT 724 **3 credits**

Advanced Ordinary Differential Equations II

Topics to be selected from the following: Sturm-Liouville theory, stability theory, perturbation theory, numerical methods, the theory of invariant imbedding and functional differential equations. Prerequisite: MAT 723.

MAT 725 **3 credits**

Mathematics for Operations Research I

Theory of stochastic processes, theory of queues, Markov processes, non-Markov processes, Markov chains, applications. Prerequisite: MAT 661.

MAT 726 **3 credits**

Mathematics for Operations Research II

Linear and non-linear programming, dynamic programming, Lagrange multiplier and duality theorems, control theory and optimal control, applications of programming. Prerequisites: MAT 671 and 673.

MAT 729 **3 credits**

Partial Differential Equations

Linear P.D.E., classification of second order P.D.E. in two variables, methods of separation of variables and eiger functions, heat, wave, and Laplace equations, applications of Fourier series, and transform methods. Prerequisite: MAT 427 or MAT 429.

MAT 733-734 **3 credits each**

Topology

Selected topics from algebraic and point-set topology with emphasis on algebraic topology. Prerequisite: MAT 684 or consent of instructor.

MAT 751 **3 credits**

Topics in Foundations of Mathematics

May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits limited to six credits. Prerequisite: MAT 701-702.

MAT 753-754 **3 credits each**

Homological Algebra

Modules, categories and factors, tensors, Hom, Tor, Ext, the dimensions of rings and modules, derived factors, cohomology of groups and algebras. Prerequisite: MAT 703-704 or consent of instructor.

MAT 755 **3 credits**

Topics in Algebra

May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits limited to six. Prerequisite: MAT 703-704 or consent of instructor.

MAT 757 **3 credits**

Topics in Analysis

May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits limited to six. Prerequisite: MAT 707-708 or consent of instructor.

MAT 765-766 **3 credits each**

Advanced Numerical Analysis

Numerical solution of ordinary and partial differential equations; advanced programming techniques; experiments with the computer. Topics selected by instructor. Three hours lecture, two hours laboratory. Prerequisite: MAT 666.

MAT 767 **3 credits**

Topics in Numerical Analysis

Topics selected by the instructor. May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits limited to six. Prerequisite: MAT 765-766.

MAT 771-772 **3 credits each**

Applied Analysis I and II

Functional analysis in Banach spaces and Hilbert spaces, with emphasis on computational applications. Theoretical topics to be selected from: linear functionals and operators, fixed point theorems, iterative methods, elementary spectral theory. Applications to be selected from: finite element methods, finite difference methods, approximation and interpolation, optimization algorithms. Prerequisites: Graduate standing and consent of instructor.

MAT 775 **3 credits**

Calculus of Variations

Variation of functionals, Euler-Lagrange equation, general variations, broken extremals, Weierstrass-Erdmann conditions, canonical forms, Noether's theorem, Hamilton-Jacobi equations, Legendre's condition, conjugate points, fields, E-function, sufficient conditions for extrema, Pontryagin's principle, introduction to linear and non-linear optimal control theory. Prerequisite: MAT 428 or 658 or consent of instructor.

MAT 777 **3 credits**

Application of High-Performance Computing Methods in Science and Engineering

(Same as MEG 777.) Application of high performance computing systems to science and engineering, models for numerically intensive problem solving, high performance numerical algorithms, FORTRAN 90 and high-performance FORTRAN. Prerequisites: Knowledge of UNIX, FORTRAN, and previous course on numerical methods. Graduate standing.

MAT 783 **3 credits**

Topics in Topology

May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits limited to six. Prerequisite: Consent of instructor.

MAT 789 **3 credits**

Topics in Advanced Mathematics

Graduate-level course in some field of mathematics, at advanced level, depending upon the current interest of the staff and the students. May be repeated to a maximum of six credits.

MAT 790 **1-3 credits**

Independent Study

Library work and reports on topics of mathematical interest. May be repeated for credit with the consent of the mathematics department. Except under special circumstances, total credits will be limited to six.

MAT 791 **1-6 credits**

Thesis

May be repeated but only six credits will be applied to the student's program. S/F grading only.

MAT 792 **1 credit**

Research Seminar

Oral presentation of assigned articles. May be repeated to a maximum of four credits.

Statistics

STA 713 **3 credits**

Experimental Design

Fundamental principles of analysis of variance; one-way, two-way, and higher order designs; nested designs; randomized blocks; split plot designs; Latin squares; multiple comparisons; analysis of covariance. Prerequisites: MAT 181 or consent of instructor and one of the following: STA 161, STA 411, STA 691.

STA 715 **3 credits**

Multivariate Statistical Methods

Multivariate techniques with emphasis on application. Topics include multivariate analysis of variance, discriminant analysis, canonical correlation and independence, principal component analysis, factor analysis, cluster analysis and analysis of repeated measurements. Prerequisites: MAT 181 or consent of instructor and one of the following: STA 161, STA 411, STA 691.

STA 751 **3 credits**

Spatial Statistics

Stochastic process, first and second order stationarity, intrinsic hypothesis, models of spatial dependence, different forms of Kriging— Ordinary Kriging, Universal Kriging, Probability Kriging, bicubic splines, conditional simulation. Prerequisites: Graduate standing and consent of instructor.

STA 761-762 **3 credits each**

Analysis of Variance

Special topics in matrix theory; noncentral chi-square, F, and t; the multivariate normal distribution; Cochran's theorem; point and interval estimation; one-, two-, three-, higher-way layouts; Latin squares, incomplete blocks and nested designs, analysis of covariance; random effects models; mixed models; randomization models. Prerequisite: MAT 661.

STA 763-764 **3 credits each**

Regression and Multivariate Analysis

Fitting a straight line, matrix theory, examining residuals, selecting the "best" fit, multiple regression, non-linear regressions, multivariate normal, estimation, classification, variance-covariance matrix, testing sets of variates, principal components, canonical correlation, distribution of characteristic roots. Prerequisite: STA 667.

STA 765 **3 credits**

Statistical Decision Theory

Introduction to decision theory, decision rules, loss functions, risk functions, decision principles, utility theory, prior information and subjective probability, noninformative priors, the posterior distribution, conjugate families, predictive distribution, Bayesian estimators, generalized Bayes estimators, credible regions, hypothesis testing, admissibility of Bayes rules, robustness of Bayes rules, minimax analysis, invariance, Bayesian sequential analysis. Prerequisite: STA 667 or consent of instructor.

STA 767 **3 credits**

Advanced Mathematical Statistics

Continuation of STA 667. Advanced topics on the theory of point estimation: equivariance, admissibility, minimaxity, optimality properties, asymptotic properties, etc.; Topics such as unbiasedness, similarity, invariance, admissibility, minimaxity in hypotheses testing; linear hypotheses; conditional inference. Prerequisite: STA 667 or consent of instructor.

STA 769 **3 credits**

Environmental Statistics II: Multivariate Methods

Testing for multivariate normality, data dependent transformations for multivariate normality, tests for outliers for multivariate data, multivariate control charts, exploratory data analysis of multivariate data using principal components, cluster analysis, factor analysis, and multivariate calibration problems. Prerequisite: STA 669.

STA 789 **3 credits**

Topics in Advanced Statistics

Graduate-level course in some field of statistics, depending upon the current interest of the faculty and the students. May be repeated to a maximum of six credits.

STA 790 **1-3 credits**

Independent Study

Library research and reports on topics of statistical interest. May be repeated to a maximum of six credits with consent of the mathematics department.

STA 791 **3-6 credits**
Thesis
 May be repeated but only six credits applied to the student's program. S/F grading only.

STA 792 **1 credit**
Research Seminar
 Oral presentation of assigned articles. May be repeated to a maximum of four credits.

The following courses, when taught by a member of the graduate faculty, may be applied to a graduate program. For listings and course descriptions of 600-level courses, please consult the current *Undergraduate Catalog* under the corresponding 400 number. The 600-level MAT and STA courses that are normally available for graduate credit are those numbered 650 or higher; the exceptions are MAT 680, which may be counted for graduate credit in an education degree program, and STA 691, STA 693, and STA 695, which may be counted for graduate credit in a biological sciences program.

MAT 651-652	Foundations of Mathematics I and II
MAT 653	Abstract Algebra I
MAT 654	Abstract Algebra II
MAT 655	Elementary Theory of Numbers I
MAT 656	Elementary Theory of Numbers II
MAT 657-658	Introduction to Real Analysis I and II
MAT 659	Elementary Complex Analysis
MAT 661	Probability Theory
MAT 662	Stochastic Processes
MAT 663	Advanced Matrix Theory and Applications
MAT 665-666	Numerical Analysis I and II
MAT 668	Applied Finite Element Analysis
MAT 669	Combinatorics I
MAT 670	Combinatorics II
MAT 680	College Geometry
MAT 683-684	General Topology I and II
MAT 687	Introduction to Partial Differential Equations
MAT 689	Advanced Mathematical Topics
MAT 690	Independent Study
SCI 620	Middle School Mathematics Content
SCI 630	Middle School Science Content
SCI 640	High School Mathematics Content
SCI 650	High School Science Content
STA 663	Applied Statistics for Engineers
STA 667	Introduction to Mathematical Statistics
STA 669	Environmental Statistics I: Univariate Methods
STA 689	Advanced Statistics Topics
STA 690	Independent Study
STA 691-692	Statistics for Scientists I and II
STA 693	Applied Regression Analysis
STA 695	Nonparametric Statistics

Physics

Chair

Selser, James C. (1981), Professor; B.S., U.S. Air Force Academy; M.S., Ph.D., University of California, Davis.

Graduate Coordinator

Spight, Lon D. (1970), Associate Professor; B.S., M.S., Colorado State University; Ph.D., University of Nevada, Reno.

Graduate Faculty

Chen, Changfeng (1990), Professor; B.S., Ph.D., Peking University.
 Cornelius, Andrew (1999), Associate Professor; B.S., Drake University; Ph.D., Washington University.
 Farley, John W. (1987), Professor; B.A., Harvard College; M.A., Ph.D., Columbia University.
 Kwong, Victor H. (1984), Professor; B.S., Queen's University; M.S., University of Windsor; Ph.D., University of Toronto.
 Lepp, Stephen H. (1991), Professor; B.S., University of Minnesota; M.A., Ph.D., University of Colorado, Boulder.
 Nicol, Malcolm (1998), Professor, B.A., Amherst College; Ph.D., University of California, Berkeley.
 Pravica, Michael (2003), Assistant Professor; B.S., Cal Tech; A.M., Ph.D., Harvard University.
 Pang, Tao (1991), Professor; B.S., Fudan University; Ph.D., University of Minnesota.
 Rhee, George (1993), Associate Professor; B.A., Cambridge University; M.Sc., Leiden University; M.A., Cambridge University; Ph.D., Leiden University.
 Shelton, David P. (1988), Professor; B.A., M.S., Ph.D., University of Manitoba.
 Smith, Diane Pyper (1980), Associate Professor; A.B., University of California, Berkeley; Ph.D., University of California, Santa Cruz.
 Zane, Len (1973), Professor; B.S., City College of New York; Ph.D., Duke University.
 Zhang, Bing (2004), Assistant Professor; B.S., M.S., Ph.D., Peking University.
 Zygelman, Bernard (1990), Associate Professor; B.S., City College of New York; Ph.D., City University of New York.

Professor Emeritus

Weistrop, Donna E. (1990-2005), Emeritus Professor; B.A., Wellesley College; Ph.D., California Institute of Technology.

The Physics Department offers both M.S. and Ph.D. degrees in physics, with concentrations in four research areas: laser physics, astronomy/astrophysics, high pressure physics (in collaboration with LLNL and LANL), and condensed matter physics. The department's experimental research programs are supported by fully equipped laboratories and mechanical, electronic and glass shops. The department is well equipped with state-of-the-art computing facilities, which allow for performing virtually any modeling and computer simulation. The observational astronomers have access to facilities including the Hubble Space Telescope.

Admission Requirements

Admission to the graduate program is normally into the Master of Science program. Admission to either the M.S. or Ph.D. program requires three letters of recommendation and a letter from the applicant to the Physics Department describing the student's interests and stating the applicant's reason for seeking admission. The GRE General Aptitude and Advanced Physics tests are required. International students must submit an official TOEFL score (minimum score of 550).

Admission to the Master of Science Program

Applicants must have a minimum grade point average (GPA) of 2.75 for all undergraduate work or a 3.00 GPA for the last two years of undergraduate work. The applicant must have completed 18 semester credits of upper-division undergraduate physics.

Admission to the Ph.D. Degree Program

Applicants must meet the usual admission requirements of the Master of Science program at UNLV. In addition, applicants seeking direct admission to the doctoral program without a previously earned Master of Science degree must have a score in the 65th percentile or above on the Advanced Physics portion of the GRE before admission. Applicants with a bachelor's degree in physics must have a minimum GPA of 3.00 for all undergraduate work or a 3.25 GPA for the last two years of undergraduate work, and a minimum of 18 credits of upper-division physics. Applicants with a master's degree in physics must have at least 15 credit hours of graduate-level course work in physics with a grade of B or better and a 3.25 GPA in the master's program.

Degree Requirements for the Master's Degree

A minimum of 30 graduate credits is required including a minimum of 15 credits (excluding thesis) in 700-level courses and six hours of research for thesis credit. A final oral exam is required on course work and thesis. A GPA of 3.00 or better is required on all course work that is part of the degree program.

Degree Requirements for the Ph.D. Degree

A total of 60 graduate credits past the bachelor's level, including the following:

1. A minimum of 36 graduate-level semester credits in physics or related fields (excluding doctoral dissertation and graduate seminar), which must include the following core courses:
PHYS 711-712 Electromagnetic Theory I, II
PHYS 721-722 Quantum Theory I, II
PHYS 700 Mathematical Physics I
PHYS 731 Statistical Physics I

Six of the 36 credits must be taken in the fourth or fifth year. Course work used to satisfy the requirements for a master's degree may be included. A minimum grade of B- is required in each course. An overall GPA of 3.00 or better is required on all course work that is part of the degree program. Course work taken outside the Physics Department must have departmental approval.

2. Six credits of PHYS 796, Graduate Seminar, including three acceptable presentations by the student.
3. A minimum of 18 semester credits of PHYS 799, Doctoral Dissertation.
4. Satisfactory performance on a written qualifying examination on advanced undergraduate physics and a satisfactory score on the GRE Advanced Physics examination. Successful candidates to the doctoral program must have satisfactory scores (generally 50 percent or better) on the GRE Advanced Physics test. Both of these requirements must be fulfilled during the first two years in the graduate program.
5. A dissertation of high quality.
6. Satisfactory performance on a final examination that will consist of an oral defense of the dissertation.

A student who enters the doctoral program with a master's degree must satisfy all of the above requirements numbered 1-6. The exact number of graduate semester credit hours past the master's degree will depend upon the quality of the student's preparation and the rate of progress during research. All courses used to satisfy the course work requirement (listed as 1 above) must have the approval of the Physics Department. The number of graduate credits beyond the master's level must be at least 30 and typically will be more.

Each student will have a four-member advisory committee, which will carry out an annual review of the student's progress.

Examinations: There are three examinations: 1) a written qualifying examination must be passed. All students entering the Ph.D. program are required to pass a written qualifying examination administered by the department before the completion of the second full year of study. 2) A satisfactory score (generally 50 percent or better) must be achieved on the GRE Advanced Physics test before completion of the second full year of study. 3) A final oral defense of the doctoral thesis must be passed.

Dissertation: The doctoral dissertation reports the results of significant original research, performed independently by the student, written in lucid scientific prose.

Astronomy

AST 710 3 credits Observational Astronomy Techniques

Techniques used in observational astronomy. Students plan and execute an observing program on a research grade telescope. Data reduction and analysis using standard professional software packages and procedures. Prerequisite: Graduate standing.

AST 713 3 credits Astrophysics I

Laws of physics applied to astrophysical situations. Major topics include solar physics, element synthesis, stellar evolution, end states of stars. Prerequisite: Graduate standing.

AST 714 **3 credits**
Astrophysics II

Laws of physics applied to astrophysical situations. Major topics include interstellar medium, the Milky Way, active galaxies, galaxy clusters, the Big Band. Prerequisite: Graduate standing.

AST 721 **3 credits**
Astrophysics of Gaseous Nebulae and Active Galactic Nuclei

(Previously known as PHYS 777.) Theory and observations used to determine the physical conditions in gaseous nebulae (H II regions, planetary nebulae, supernova remnants, etc.) and active galactic nuclei. Formation of spectra in these regions and analysis to determine temperatures, density and chemical composition. Recent observational results also discussed. Prerequisite: Graduate standing.

AST 727 **3 credits**
Cosmology

(Previously known as PHYS 777.) Classical cosmology, the isotropic universe, gravitational lensing the age and distance scales, the early universe, observational cosmology, matter in the universe, galaxies and their evolution, active galaxies, galaxy formation and clustering, cosmic background fluctuations. Prerequisite: Graduate standing.

AST 731 **3 credits**
Stellar Atmospheres: Theory, Observation, and Analysis

Theoretical treatment of stellar atmospheric structure and radiative transfer, state-of-the-art astrophysical analysis techniques used to derive atmospheric parameters, our current observational understanding of stellar atmospheres, special topics in stellar atmospheres (pulsation, chromospheric activity, etc.), and relevance to galactic and extragalactic astronomy. Prerequisite: Graduate standing.

AST 747 **3 credits**
Interstellar Medium

(Previously known as PHYS 771.) Physics of the interstellar medium. Overall chemical, thermal and physical state of the gas in our galaxy. Astrochemistry, cosmic rays, radiative transfer, atomic and molecular physics, thermal equilibrium, and the overall dynamics of the galaxy. Prerequisite: Graduate standing.

Physics

PHYS 700-701 **3 credits each**
Mathematical Physics I, II

Reviews and introduces various specific mathematical functions and techniques basic to the study of physics.

PHYS 702-703 **3 credits each**
Classical Mechanics I, II

Newtonian mechanics from an advanced point of view. Variational principles. Lagrange's and Hamilton's equations, central forces, rigid body motion, canonical transformations, Hamilton-Jacobi theory, small oscillations.

PHYS 705 **3 credits**
Advanced Optical Systems

Analysis and design of complete optical systems. Light sources and detectors. Matrix methods. Characteristics and application of optical components including lenses, mirrors, fibers, filters, holographic elements, prisms, and gratings. Apertures, stops, and pupils. Fourier optics. Prerequisites: Graduate standing or consent of instructor; PHYS 461 or equivalent.

PHYS 707 **3 credits**
Condensed Matter Theory I

Comparison of different band structure calculation methods. Local-density approximation. Relation of structural, transport, and optical properties to electronic structure. Properties of metals, insulators and semiconductors. Quantum theory of magnetism. Prerequisites: PHYS 482/682, PHYS 483/683 and graduate standing.

PHYS 708 **3 credits**
Condensed Matter Theory II

Lattice dynamics. Electron-photon interaction. Elementary excitations. Many-body effects in condensed matter physics. Superconductivity. Phase transitions. Renormalization group theory. Prerequisites: PHYS 707 and graduate standing.

PHYS 711-712 **3 credits each**
Electromagnetic Theory I, II

General properties of vector fields with special application to electrostatic and magnetostatic fields. Solutions to boundary value problems. General electromagnetic equations and conservation theorems. Energy and momentum in the electromagnetic field. Motions of charged particles in electromagnetic fields. Electromagnetic theory of radiation electrodynamics and special relativity. Reflection, refraction, and dispersion of electromagnetic waves. Prerequisites: PHYS 422/622 and graduate standing.

PHYS 721-722 **3 credits each**
Quantum Theory I, II

Development of quantum theory. Schroedinger equation, operators, expectation values. Matrix formalism of Heisenberg, eigenvalue problems, wave packets, conjugate variables, and uncertainty principle. Solution of wave equation for square potentials, harmonic oscillator, and hydrogen-like atoms. Perturbation theory, both time-independent and time-dependent. Degeneracy, interaction of matter with radiation, selection rules. Scattering theory, Born approximation and other approximation methods. Dirac notation and an introduction to spin. Prerequisites: PHYS 482/682 and graduate standing.

PHYS 723 **3 credits**

Quantum Optics

Properties of light, its creation, and its interaction with matter explored as quantum-mechanical phenomena. Quantization of the light field. Quantum theory of coherence. Dissipation and fluctuations. Light amplification. Nonlinear optics. Prerequisites: PHYS 622 and PHYS 682/721, or consent of instructor.

PHYS 724 **3 credits**

Laser Applications: Interaction with Matter

Laser principles. Introduction to laser spectroscopy, isotope separation, and trace element analysis. Laser induced fusion. Laser induced plasmas and their radiation. Prerequisite: Graduate standing or consent of instructor.

PHYS 725 **3 credits**

Spectroscopy

Survey of spectroscopy, including absorption and emission spectroscopy, classical grating spectroscopy, laser spectroscopy, Raman spectroscopy, and Fourier transform spectroscopy. Intensities, sensitivity limits, and resolution. High-resolution and ultra-high-resolution spectroscopy. Photon correlation spectroscopy. Analysis of spectra. Prerequisites: PHYS 461/661, 481/681 and graduate standing.

PHYS 726 **3 credits**

Advanced Quantum Theory

The Dirac equation, hole theory, second quantization, Feynman diagrams, self-energy, vacuum polarization, renormalization, QED effects in high-Z atoms, path integral methods in field theory. Prerequisites: PHYS 722 and graduate standing.

PHYS 727 **3 credits**

Advanced Topics in Semiconductor Devices I

Topics of current interest in solid state electronic devices: physics of semiconductors, thermal and optical and electronic properties of semiconductors, bipolar junction devices, field effect devices, surface related effects, optoelectronic devices, semiconductor lasers. Applications and the design of circuits using these devices. Intended for electrical and electronic engineers, physicists, and qualified senior students in engineering and physics. Prerequisites: PHYS 411 and 683, or EEG 414 and 420, and consent of instructor.

PHYS 728 **3 credits**

Applications of Group Theory in Quantum Mechanics

Abstract group theory, theory of group representations, and direct product theory. Relationship to quantum mechanics; applications to atomic, molecular and solid state physics. Time-reversal symmetry, continuous groups, and the symmetric group. Prerequisites: PHYS 482/682 and graduate standing.

PHYS 731 **3 credits**

Statistical Physics I

Liouville's theorem, ensembles, Boltzmann and Gibbs methods. Non-ideal gases, cluster expansions, theory of condensation. Prerequisites: PHYS 467, 468 and graduate standing.

PHYS 732 **3 credits**

Statistical Physics II

Quantum statistical mechanics, Fermi-Dirac and Bose-Einstein statistics. Phase transitions. Fluctuations. Prerequisites: PHYS 731 and graduate standing.

PHYS 741 **3 credits**

Atomic and Molecular Theory

Hartree-Fock theory, many-body perturbation theory, relativistic effects, energy levels, oscillator strengths, bound-continuum processes, Born-Oppenheimer approximation for molecules, symmetries, selection rules. Prerequisites: PHYS 721 and graduate standing.

PHYS 771 **3 credits**

Advanced Topics in Experimental and Theoretical Physics

Consists of lectures dealing with experimental and theoretical aspects of one of the fields listed. May be repeated for credit in different fields to a maximum of 12 credits. a) Electrodynamics. b) Fluid mechanics. c) Plasma physics. d) Quantum theory. e) Nuclear physics. f) Atomic and molecular physics. g) Electron and ion physics. h) Low-temperature physics. i) Solid and/or liquid state. k) Cosmic rays. l) Relativity. m) Elementary particles. p) Astrophysics. r) Atmospheric Physics. s) Geophysics. t) Applied Optics. Prerequisite: Depends on particular topic, consult instructor.

PHYS 777 **1-6 credits**

Advanced Special Problems

Special study of advanced topics not specifically covered in listed courses. May be repeated to a maximum of six credits. Prerequisite: Prior conference with instructor.

PHYS 781 **1 credit**

Thesis Research

Research leading to master's level program prospectus. May be repeated but only one credit can be applied to the student's program. S/F grading only. Prerequisite: Enrollment in the M.S. program.

PHYS 782 **1 credit**

Dissertation Research

Supervised research prior to advancement to candidacy in the doctoral program. May be repeated but only two credits can be applied to the student's program. A maximum of one credit is allowed per semester. S/F grading only. Prerequisite: enrollment in the doctoral program.

PHYS 796 **1 credit**

Graduate Seminar

Students required to give presentations on topics outside their Ph.D. work and to discuss the presentations. Presentations by graduate students given on a regularly scheduled basis, last about an hour, and given at the nonspecialist level. A total of three acceptable presentations in three different semesters during the six semesters of enrollment required. May be repeated to a maximum of six credits. Prerequisite: Graduate standing.

PHYS 797 **3-6 credits**
Thesis

May be repeated but only six credits will be applied to the student's program. S/F grading only.

PHYS 799 **3-6 credits**
Doctoral Dissertation

Doctoral dissertation. May be repeated. A minimum of 18 credits required for the degree. Prerequisites: Qualifying exam and approval by department.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600 level normally requires additional work.

PHYS	604	Computational Techniques in Physics
PHYS	614	Intermediate Laboratory II
PHYS	622	Electricity and Magnetism
PHYS	624	Mechanics
PHYS	626	Physics of Solids
PHYS	631	Nuclear and Elementary Particle Physics
PHYS	641	Mathematical Physics I
PHYS	651	Modern Scientific Instrumentation
PHYS	661	Light and Physical Optics
PHYS	662	Modern Optics and Photonics
PHYS	667	Thermodynamics
PHYS	668	Statistical Mechanics
PHYS	681	Quantum Mechanics I
PHYS	682	Quantum Mechanics II
PHYS	683	Special Topics in Physics
PHYS	685	Condensed Matter Physics

Water Resources Management

Director

Papelis, Charalambos (1994), Associate Research Professor; B.S., National Technical University, Athens, Greece; M.S., Ph.D., Stanford University.

Graduate Faculty

Faculty participating in the Water Resources Management Graduate Program are affiliated with several different colleges, departments, and centers of UNLV and the NSHE. Researchers from governmental or private agencies may also participate as adjunct faculty. A list of participating faculty can be found at the website of the WRM Graduate Program at <http://www.unlv.edu/depts/wrm/faculty.html>.

The Water Resources Management Program is a flexible, interdisciplinary course of study leading to an M.S. degree. It is a technically and scientifically based program that blends the physical aspects of the hydrology sciences, in a broader sense with policy and management issues in hydrosience. People with degrees in physical, biological, or natural sciences and engineering and those with degrees in the social sciences, management, environmental studies, or related disciplines are encouraged to apply to the program. Working together, the student and faculty advising committee will design specific courses of study and thesis topics such that all students will strengthen their understanding of hydrologic sciences and water management while also developing technical skills.

The Water Resources Management Graduate Program is housed in the College of Sciences and encourages multidisciplinary study and research with participating faculty at UNLV from the colleges of Sciences, Business, Urban Affairs, Engineering, and Liberal Arts and participating faculty at the Harry Reid Center for Environmental Studies (HRC) on the UNLV campus, the Desert Research Institute (DRI), and the University of Nevada, Reno (UNR). Adjunct participating faculty may also be with the U.S. Environmental Protection Agency (EPA), the U. S. Geological Survey (USGS), Department of Energy (DOE), Las Vegas Valley Water District (LVVWD), or other governmental or private agencies.

Admission Requirements

Applicants to the program must hold a B.S. or B.A. degrees in the physical, natural or social sciences, business, management, or a related field. Admission to the program is contingent upon:

1. A minimum overall undergraduate grade point average of 3.00.
2. Satisfactory scores on the Graduate Record Exam. This requirement may be waived in the case of candidates with exceptional professional experience.

3. Three letters of recommendation from individuals competent to comment on the applicant's promise as a graduate student.
4. A letter of application stating the student's interests and goals.
5. Submission of an application to the Graduate College, as well as official transcripts of all college-level course work.

Degree Requirements: Master of Science

1. Course work. Because of the interdisciplinary nature of the Water Resources Management Graduate Program, students are encouraged to select courses from different departments that would strengthen their background and help them achieve their research and educational goals. Students must develop their course work program with the consent of the advisor and the student's thesis committee. Courses from different colleges and departments may be incorporated into the student's program of study. The following is a list of potential sources of course work. Students should consult the listings of individual departments.
 - a. One required course: WRM 706 Research Methods in Water Resources Management (three credits);
 - b. Six credits in hydrologic sciences courses required (GEOL or CEG courses);
 - c. Three additional credits in science, mathematics, or engineering courses required (see listing of BIO, CEG, CHEM, GEOL, MAT, MEG, PHYS, or STA courses);
 - d. Nine credits in management, public administration, economics, law, or political science courses required (see listing of ECO, EPS, ENV, HIS, LAW, MGT, MIS, POS, or PUA courses);
 - e. Six credits of electives (see listing of BIO, CEG, CHEM, ECO, EPS, ENV, GEOL, HIS, LAW, MAT, MEG, MGT, MIS, PHYS, POS, PUA, or STA courses)
2. Thesis: six credits
3. Final Examination: There will be a final examination that will include a comprehensive oral examination.
4. Total semester credit hours: 33 credits
A minimum of 15 credit hours must be in 700-level courses. A 3.00 grade point average is required in all course work used in the degree program.

Water Resource Management

**WRM 706 3 credits
Research Methods in Water Resources Management**

Discussion of the processes of scientific research and research design as applied to modern water resources management. Includes scientific approaches to field and laboratory research, research and professional ethics, writing, and public presentation. Model thesis prospectus and grant proposals prepared. Prerequisite: Graduate standing or consent of instructor.

**WRM 790 1-3 credits
Special Topics in Water Resources Management**

Topics selected and published in the class schedule. May be repeated to a maximum of nine credits. Prerequisite: Consent of instructor.

**WRM 791 1-3 credits
Independent Study**

Review of recent literature in a specialized area related to water resources. May be repeated to a maximum of four credits. Prerequisite: Consent of instructor.

**WRM 798 1-3 credits
Thesis**

Enrollment by consent of research director only. May be repeated for credit with cumulative maximum of six credits allowed toward degree program. S/F grading only.

Greenspun College of Urban Affairs

“Making a Difference” is more than a motto for the Greenspun College of Urban Affairs. It is the focus of all we do. The vibrant, complex environment in the Las Vegas Valley is the laboratory for the Greenspun College. Dedicated to using the knowledge of its disciplines to address the issues and problems in an urban environment, the faculty and students in the Greenspun College strive to make a positive difference in Las Vegas, the region, and the nation. As they advance their own disciplines, the outstanding faculty in the college share a commitment to fostering the professional development of their students and equipping them to address the myriad of issues that confront individuals as well as organizations in an urban environment.

The college offers programs leading to the Master of Arts in Communication, an Executive Master of Arts in Criminal Justice, the Master of Science in Counseling and in Environmental Studies, the Master of Social Work, the Master of Public Administration, and the Ph.D. in Environmental Science. These graduate programs emphasize the application of theory in professional practice to address the issues and problems of urban life. Partnerships among the departments and with the community provide students abundant opportunities to develop professionally under the guidance of expert faculty and skilled practitioners. By bridging the gap between the community and the university, the faculty and students in the college are making a difference in thousands of lives.

Martha S. Watson, Dean

Environmental Studies

Chair

Neill, Helen (1992), Associate Professor; B.A., Trinity University; M.A., Ph.D., University of New Mexico.

Graduate Coordinator

Hassenzahl, David (2000), Assistant Professor; B.A., University of California, Berkeley; Ph.D., Princeton University.

Graduate Faculty

Deacon, James E. (1960), Professor; B.S., Midwestern University; Ph.D., University of Kansas.

Drohan, Patrick J. (2002), Assistant Professor, Geoscience; B.S., Rutgers University; M.S., Ph.D., Penn State University.

Farnham, Timothy J. (2002), Assistant Professor; B.A., Williams College; ;M.S., University of Michigan; Ph.D., Yale University.

Ferguson, Paul W. (1999), Vice President of Research and Graduate Studies; B.A., Whittier College; Ph.D., University of California, Davis.

Gerstenberger, Shawn (1997), Assistant Professor; B.S., University of Wisconsin-Platteville; M.S., Ph.D., University of Illinois at Champaign-Urbana.

Hodge, Vernon R. (1970), Professor, Chemistry; B.A., M.S., San Diego State University; Ph.D., University of California, San Diego and San Diego State University.

Johnson, Brian J. (1988), Associate Professor, Chemistry; B.S., The College of Idaho; Ph.D., University of Arizona.

Rothman, Hal K. (192), Professor, History; B.A., University of Illinois; M.A., Ph.D., University of Texas at Austin.

Spell, Terry Lee (1996), Assistant Professor, Geoscience; B.S., West Georgia College; M.S., New Mexico Institute of Mining and Technology, Ph.D., State University of New York, Albany.

Stave, Krystyna (1997), Assistant Professor; B.S., Cornell University; M.S., Dartmouth College; Ph.D., Yale University.

Titus, Alice (1977) Professor; A.B., College of William and Mary; M.A., University of Georgia; Ph.D., Florida State University.

The Department of Environmental Studies administers an interdisciplinary program offering M.S. and Ph.D. degrees in Environmental Science. At present two fields of concentration, Environmental Chemistry and Environmental Policy and Management, are available to students seeking these degrees. An Environmental Science Graduate Coordinating Committee (GCC) appointed by the Dean of the Graduate School establishes policy for the degree program. Subcommittees in the areas of concentration are delegated responsibilities to implement the appropriate field in accordance with policies adopted by the parent committee. The program descriptions for the Environmental Science degrees are provided here. Students interested in pursuing degrees in chemistry or geology should refer to graduate program descriptions of the appropriate department in the College of Sciences.

Description and Objectives of the Program

A graduate program in Environmental Science, while requiring depth of study in specialized areas, must also foster an understanding of interrelationships between disciplines. It must also emphasize the need to understand the consequences of using science and technology to serve civilization. In an effort to respond to these demands, we require two core courses: Environmental Problem Solving (ENV 702), and Environmental Law and Policy Seminar (ENV 703), to examine these connections, interrelationships and consequences. Course work in support of specialized study in each track, or specific field, will also frequently include courses from several departments. We further anticipate that research undertaken by candidates for the degrees will often cross disciplinary lines. Fields selected for immediate implementation include Environmental Chemistry and Environmental Policy and Management. We anticipate addition of other fields as expertise develops and demand warrants.

The general objectives of offering Ph.D. and M.S. degrees in Environmental Science at UNLV are to:

1. Respond to local, state, regional, national and international needs for environmental professionals with advanced degrees.
2. Assist in the process of shifting toward more sustainable practices in our local community, state and throughout the world.
3. Encourage graduate students, undergraduate students, and faculty from various departments, colleges and NSHE institutions to collaborate in an effort to find new and creative solutions to environmental problems.
4. Assist in the development of expertise that will both support excellence in Environmental Science at UNLV and lead to the enhancement of disciplinary graduate programs of each department.
5. Provide opportunities and encouragement for both disciplinary and interdisciplinary student and faculty interactions that will promote team-building, undergraduate/graduate/faculty mentoring activities, community problem-solving, and enhance instructional programs at UNLV.
6. Support graduate student research with grants and contracts from extramural sources.
7. Encourage faculty and graduate student research on environmental projects developed in cooperation with the UNLV International Programs Office and institutions abroad.

Degrees Awarded

Doctor of Philosophy (Ph.D.) in Environmental Science
Master of Science (M.S.) in Environmental Science
Environmental Chemistry Field
Environmental Policy and Management Field

Admission Requirements

Applications are reviewed twice per year: June 15 and November 15. Materials 1-8 are due in the Environmental Studies Department Office prior to the above mentioned dates.

1. A bachelor's degree from an accredited college or university.
2. Minimum of three credits of calculus and at least 12 credit hours in either/or physical and biological sciences with grades of B or better.
3. Application to the Graduate College, including a 1-2 page "Statement of Objectives." (See below).
4. Three letters of recommendation from professors, employers and/or professional colleagues.
5. A GPA of 3.00 on a 4.00 scale is required for admission.
6. Scores in the 50th percentile in all three areas of the Graduate Record Exam.
7. International students must take and obtain a score of at least 550 on the TOEFL exam.
8. A recommendation for admission by the Graduate Coordinating Committee.

The Statement of Objectives is intended to provide the Graduate Coordinating Committee information essential to a determination of whether the necessary physical and intellectual resources exist at UNLV to permit the applicant to achieve her/his objectives. The statement will be used by the committee to help assess the availability of appropriate expertise at UNLV, identify and appoint an appropriate advisor for the first year of graduate study, and make other decisions regarding admissibility.

Degree Requirements

Each student admitted to the Ph.D. or the M.S. degree program in Environmental Science will be appointed an interim advisor. The interim advisor will assist with designing a tentative curriculum, engage in discussions about possible research directions or opportunities, assist in identifying an advisor, and introduce the student to the personnel and resources available in Environmental Science at UNLV. By the end of the first (M.S.) semester or second (Ph.D.) semester the student will select a chair of her/his Advisory Committee and, in consultation with that chair recommend membership on the Advisory Committee. The Advisory Committee and the chair are subject to approval by the Graduate Coordinating Committee. The Advisory Committee will assist the student in course selection and definition of a research topic for the thesis or dissertation. All students in Environmental Science will be required to complete the two core courses, ENV 702 and ENV 703.

A minimum of 33 credits (of which at least 21 will be in 700-level courses) beyond the baccalaureate, including a minimum of six credits for thesis, is required for the M.S. degree. A minimum of 72 credits (of which at least 36 will be in 700-level courses) beyond the baccalaureate, including a minimum of 12 credits (18 in some fields) for dissertation, is required for the Ph.D. degree. Requirements for completion of each of the fields in these degree programs will frequently make it necessary for students to exceed these minimum credit requirements.

Satisfactory progress is defined as filing an approved program before the completion of nine credits of course work, completion of at least six credits of the approved program per calendar year, maintenance of a GPA of 3.00, no grades below a C, and compliance with the letter and

spirit of the *Graduate Catalog*. Any student whose GPA falls below 3.00 will be placed on probation and will have one semester to raise the GPA to a 3.00 or above. The program of study will be developed by the student and advisor and filed with the Graduate College. Prior to filing, the student's graduate committee must approve the program. The program of study must be submitted by the second semester of study. Successful completion and oral defense of a dissertation is required for the Ph.D. degree. Successful completion and oral defense of a thesis is required for the M.S. degree. The student is advised to examine the specific information for each field of study for additional requirements.

Environmental Chemistry

Requirements

Students both in the M.S. and Ph.D. programs (Environmental Chemistry field) in addition to requirements previously noted, must take CHE 791 Seminar (minimum of six credits), elective graduate-level courses in CHE or WRM (i.e., minimum of nine credits chosen from CHE 710, 725, 735, 750, and 765, CHE 795 Independent Study (maximum of four credits), and thesis and dissertation credits (minimum of six credits for thesis and 18 credits for dissertation).

Doctoral Requirements

1. Eighteen credits of Dissertation will be required as part of the graduation requirement. Students who complete an M.S. in Chemistry or Environmental Science (Environmental Chemistry) may apply up to 24 credit hours of class work from the master's to the Ph.D. degree program with the consent of their committee. Course selection will be based on the student's research objectives, academic record and results of a preliminary examination. This examination will consist of the American Chemical Society Advanced Placement Examination or will be a three-part placement examination prepared by the Chemistry Department with assistance from faculty in other areas appropriate to the particular interests of the student.
2. Satisfactory performance on a written Comprehensive Examination prepared by the Chemistry Department (with collaboration from other appropriate faculty).
3. Satisfactory oral defense of the student's dissertation proposal before the student's dissertation committee. The dissertation advisor shall be present but non-voting.
4. Satisfactory performance on an oral final defense of the dissertation. The dissertation committee will be selected by the completion of the student's first year and composed of:
 - a. Three members of the Chemistry Department (usually the Dissertation advisor and two faculty in related fields).
 - b. Two members selected from the participating units in the Environmental Science Doctoral Program (including collaborating departments at UNLV and/or faculty from the HRC, DRI or UNR).
 - c. One member appointed by the Graduate College.

Environmental Policy and Management

Requirements

1. Students in the M.S. and Ph.D. programs (Environmental Policy and Management Field) in addition to requirements previously noted, must, by the end of the first (M.S.) or second (Ph.D.) semester, file a program of study listing courses to be completed (24 credits of the M.S. or 44 credits of the Ph.D. must be 700 level or above). The program of study is to be prepared by the student and his/her advisor and must be approved by the student's advisory committee. The advisory committee will be selected by the completion of the student's first (M.S.) or second (Ph.D.) semester. It will be composed of three (M.S.) or four (Ph.D.) members representing appropriate expertise plus one representative from the Graduate College. Each student will be required to take ENV 701 during his or her first Fall semester in the program and an advanced methods course during some subsequent semester. For the M.S. degree a minimum of three courses from two areas and for the Ph.D. degree a minimum of three courses from three areas will be selected. Areas selected may include: anthropology/archaeology, biological sciences, chemistry, communication, economics, environmental studies, geology, risk analysis, history, mathematics, political science, public administration, sociology, statistics, and others approved by the student's committee. Areas are determined by topic, not necessarily by program or department. Each student in either the M.S. or Ph.D. program must complete a minimum of 12 credit hours each calendar year, and at least three each semester.
2. M.S. students. During the first full year in the program, each student will explore the four options for completing the degree (Thesis, Professional Paper, Examination and Practicum). By the end of his or her first full year in the program, each student will request one of the four options.
 - a. Thesis Option: Students in the Thesis Option, in addition to requirements previously noted, must complete a minimum of 33 credits beyond the baccalaureate, including six credits of thesis, and must complete and orally defend a thesis. Each student who wishes to earn the M.S. under the thesis option must, by the end of his or her first full year in the program, have completed a thesis prospectus, approved by the Advisory Committee. Students in the Thesis Option may not count ENV 791 or ENV 792 credits towards the degree and may count no more than six credits of ENV 749 and ENV 790 combined towards the degree.
 - b. Professional Paper Option: Students in the Professional Paper Option, in addition to requirements previously noted, must complete a minimum of 33 credits beyond the baccalaureate, including six credits of professional paper research, and must complete and orally defend a professional paper. Each student who wishes to earn the M.S. under the Professional Paper Option must, by the time he or she has completed one full year in the program, have completed a professional paper prospectus, approved by the Advisory Committee. Students in the professional Paper Option

may not count ENV 791 or ENV 795 credits towards the degree and may count no more than six credits of ENV 749 and ENV 790 combined toward the degree.

- c. **Examination Option:** Students in the Examination option, in addition to requirements previously noted, must complete a minimum of 33 credits beyond the baccalaureate, including three credits of examination preparation under the direction of a graduate program chair, and must complete a written examination that will take place over a two-day period, eight hours each day. Each student who wishes to earn the M.S. under the Examination Option must, by the time he or she has completed one full year in the program, have completed a detailed review of the literature appropriate to the proposed examination topic. The student's advisor will design the examination and determine the dates of completion and rubric for grading. The advisory Committee may require an oral defense of the examination. Students in the Examination Option may not count ENV 92 or ENV 95 credits towards the degree and may count no more than six credits of ENV 749 and ENV 790 combined towards the degree.
- d. **Practicum Option:** Students in the Practicum Option, in addition to requirements previously noted, must complete a minimum of 33 credits beyond the baccalaureate, including a minimum of six credits combined of Internship (ENV 790) and Teaching practicum (ENV 749). Each student who wishes to earn the M.S. under the Practicum Option must, by the time he or she has completed one full year in the program, have completed a detailed review of the literature relevant to their area of specialization, approved by the Advisory committee. The Advisory Committee must approve the student's proposed program of courses and approve a final report prepared by the student outlining the Practicum experience and explaining its relationship to the selected course of study. Students in the Practicum Option may not count ENV 791, ENV 792 or ENV 795 credits towards the degree and may count no more than nine credits of ENV 749 and ENV 790 combined towards the degree.
3. **Ph.D. students in the Ph.D. program** will have three additional semesters beyond completion of ENV 7701 to advance to candidacy. Each student in the Ph.D. program must take a minimum of three credits of Directed Readings (ENV 797) each semester following completion of ENV 701 and until he or she has successfully advanced to candidacy. A maximum of six credits of ENV 797 may count towards the 72 total credits required by the program. Each Ph.D. candidate must take a minimum of three credits of dissertation research (ENV 798) each semester until graduation. At least 12 and no more than 18 credits of ENV 798 and ENV 797 combined may be included in the 72 total credits required by the program. No more than six of these may be ENV 797; a minimum of 12 and a maximum of 18 of these may be ENV 798.

Students who complete an M.S. in Environmental Science (Environmental Policy and Management) may apply up to

24 credit hours of class work from the master's to the Ph.D. degree program with the consent of their committee. Following completion of course work from the three areas selected, the Advisory Committee will administer a comprehensive examination. Students who fail the comprehensive examination may be allowed to retake it one time. The student will then defend a dissertation proposal before the student's Advisory Committee. The major professor will be present but not voting during the defense of the proposal. The student's Doctoral Advisory Committee must approve the dissertation proposal. Students are advanced to candidacy for the Ph.D. upon the completion of all course work and approval of the dissertation research proposal. Completion of the dissertation and its successful defense will complete degree requirements.

Environmental Sciences

ENV 701 3 credits

Environmental Science Pro Seminar

Introduction to research approaches appropriate to the environmental sciences. Includes quantitative research design. Development of literature review and thesis/dissertation prospectus. Prerequisites: Graduate standing in Environmental Science program.

ENV 702 3 credits

Environmental Problem Solving

Instruction and experience in the development of conceptual and quantitative systems models useful in analyzing environmental problems, understanding the effects of those problems on human and natural systems, and identifying optimal solutions to those problems. Examines the dynamic, interdependent and interactive relationships between human activities and ecosystem function and structure. Effects of these activities on biogeochemical cycles, energy flow, and biodiversity. Evaluates opportunities to shift toward more sustainable human behavior. Prerequisites: Graduate standing in environmental science or consent of instructor.

ENV 703 3 credits

Environmental Law and Policy Seminar

Substantive aspects of major federal environmental laws and their concomitant regulations, as well as the policy underlying their promulgation and implementation. The present status and implementation of the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the comprehensive Environmental Response, Compensation and Liability Act. Examines the policies underlying the existing laws, their derivative regulations, and the changes being considered by Congress for these laws. Prerequisites: Graduate standing in environmental science or consent of instructor. Prerequisites: Consent of instructor.

ENV 711 (Formerly ENV 794) 3 credits

Risk Assessment and Risk Management

Principles of risk management as related to exposure to environmental contaminants. Prerequisite: Consent of instructor.

ENV 712 **3 credits**
Environmental Risk Decision Making

Explores interface of technical information, experts, and environmental decision arenas. Major issues include decision making under uncertainty, risk perception, risk communication, and public participation in environmental risk modeling.

ENV 720 **3 credits**
Natural Resource Valuation

Exploration of the valuation literature including traditional, environmental, and experimental economics; physical sciences and philosophy. Methodologic and normative issues. Application and design of valuation tools. Prerequisites: ENV or equivalent.

ENV 725 **3 credits**
Quantitative Methods for Environmental Science

Quantitative research tools specifically developed for environmental science including models, data collection and statistical methods, both univariate and multivariate analyses. Emphasis on methods appropriate to student theses and dissertations.

ENV 735 **3 credits**
Risk-Benefit Assessment

History, philosophy and methodology of risk-benefit analysis for environmental and health decision making. Explores the history of assessing costs and benefits of public projects, describes the current status of cost-effectiveness analysis in risk regulatory policy. Develops tools to estimate and compare risks, costs and benefits associated with governmental, societal and private risk decision-making.

ENV 750 **3 credits**
Environmental Studies and Public Policy

Introduces the principles of public policy, science, and technology that shape environmental protection strategies in this nation and abroad. ENV 750 will act as a foundation policy course in the graduate program of the Department of Environmental Studies. Prerequisite: Graduate standing.

ENV 749 **3 credits**
Environmental Sciences Teaching Practicum

Introduction to methods and content for environmental science instructors. Tips, methods, styles, scholarship of teaching and learning. Prerequisite: Currently teaching undergraduate ENV course.

ENV 751 **3 credits**
International Environmental Policy

Examines environmental protection strategies on the international stage. Prerequisite: Graduate standing.

ENV 752 **3 credits**
Advanced Seminar in Environmental Studies and Public Policy

Explores special topics in the field of environmental policy. Prerequisite: ENV 750 or consent of instructor.

ENV 790 **1-3 credits**
Internship in Environmental Science

Individual students complete appropriate internship with private, public or non-profit organization involved in environmental management. Terms to be negotiated with and approved by internship supervisor and Graduate Coordinator. May be repeated to a maximum of six credits. Grading S/F.

ENV 791 **3 credits**
Environmental Sciences Examination Preparation

Individual preparation for Masters Degree examination. May be repeated any number of times, but no more than three credits will count towards degree requirements. Prerequisite: ENV 701.

ENV 792 **3-6 credits**
Environmental Sciences Professional Paper Research

Individual research towards an applied professional paper under the direction of a faculty member. May be repeated any number of times, but no more than six credits will count towards degree requirements. Prerequisite: ENV 701.

ENV 793 **1-6 credits**
Independent Study in Environmental Science

Independent study of a selected topic in environmental science. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in environmental science or consent of instructor.

ENV 794 **1-3 credits**
Special Topics in Environmental Science

Selected topic of current interest not covered in any existing course. May be repeated for a maximum of six credits. Prerequisite: Graduate standing in environmental science or consent of instructor.

ENV 795 **3 credits**
Thesis

May be repeated but only six credits applied to the student's program. S/F grading only.

ENV 797 **3 credits**
Directed Readings

Individual research to develop doctoral dissertation prospectus under the direction of a faculty member. May be repeated any number of times, but no more than six credits will count towards degree requirements. Prerequisites: Admitted to ENV Ph.D. program, ENV 701.

ENV 798 **3-6 credits**
Dissertation Research

Research analysis and writing towards completion of dissertation and subsequent defense. May be repeated up to eighteen credits. S/F grading only.

- ENV 601 Advanced Environmental Toxicology
- ENV 611 Environmental Risk Management
- ENV 614 Air Pollution Science and Management
- ENV 660 Environmental Modeling

Hank Greenspun School of Journalism and Media Studies

Director

Sohn, Ardyth B. (2005), Professor; B.A., University of Illinois; M.A., Ph.D., Southern Illinois University.

Graduate Coordinator

Mullen, Lawrence J. (1994), Associate Professor; B.A., Buffalo State College; M.A., University of Maryland; Ph.D., University of Iowa.

Graduate Faculty

Borchard, Gregory (2003), Assistant Professor; B.A., M.A., University of Minnesota; Ph.D., University of Florida.

Ferri, Anthony J. (1985), Associate Professor; Honors B.A., University of Windsor; M.A., Ph.D., Wayne State University.

Kilker, Julian A. (1999), Associate Professor; B.A., Reed College; M.A., Ph.D., Cornell University.

Larson, Gary (1997), Assistant Professor; B.A., University of Minnesota; M.A., North Dakota State University; Ph.D., University of Minnesota.

Traudt, P.J. (1996), Associate Professor; B.A., University of Colorado-Boulder; M.A., University of Utah; Ph.D., University of Texas-Austin.

Professor Emeritus

Cloud, Barbara L. (1979-2005), Emeritus Professor; B.A., Stanford University; M.A., University of Oregon; Ph.D., University of Washington.

The Hank Greenspun School of Journalism and Media Studies offers the Master of Arts degree in Communication Studies with emphasis in journalism and media studies. The course of study is designed to emphasize research and theoretical exploration in the areas of journalism history, mass media, and visual studies. The courses are designed to help students acquire the tools to conduct graduate-level research and produce scholarship. The curriculum also caters to those with a professional orientation thus allowing students to investigate areas such as advertising, media management, public relations, television and film, the Internet and emerging media forms and their effects at the social and individual levels. The program aims to develop a deep understanding of the media to make students better consumers of the media, developers of mediated messages, critics of mediated subject matter, and experts on journalistic and mass mediated problems and issues.

All students are required to take four introductory courses; Survey of Journalism and Media Studies, Qualitative Research Methods, Quantitative Research Methods, and Journalism and Media Theory (JMS 710, JMS 711, JMS 712, and JMS 730). Because each student's goals are unique, the program is flexible in developing individual program curricula. The objective is to balance the discipline's varied traditions in theory, history, and research with attention paid especially to the changing media landscape of the twenty-first century.

Admission Requirements

In addition to the application and transcripts you need to send to the Graduate College, the school requires that you send it the following:

1. A copy of your undergraduate transcripts (you must have a GPA of at least 3.00 in the last 90 credits of undergraduate course work).
2. Satisfactory scores on the verbal and quantitative sections of the Graduate Record Examination (GRE).
3. At least three letters of recommendation from people who are able to attest to your ability to do graduate-level work. At least one of these letters should come from a former or current professor or college-level instructor.
4. A letter of intent detailing your goals and expectations as a graduate student in journalism and media studies.
5. A sample of your writing. A college course term paper, for example.

Degree Requirements

All fully admitted students are required to complete the programs' four core courses:

JMS 710	Survey of Journalism and Media Studies
JMS 711	Qualitative Research Methods
JMS 712	Quantitative Research Methods
JMS 730	Journalism and Media Theory

Students have the choice of doing research leading to the writing of a thesis (Thesis Track) or completing a program of course work leading to a comprehensive examination (Examination Track). The master's degree program is designed to meet the student's professional and/or personal objectives. Although an undergraduate degree in journalism, broadcasting, media studies, or communication is not required for admission to the program, a student without a background in these related fields may be required to complete additional course work at the graduate or undergraduate level in order to satisfy minimum expectations of someone entering a graduate course of study.

Thesis Track

In this track students complete a minimum of 30 credit hours of approved course work plus six hours of thesis credits. The classes may include up to nine credits outside the Hank Greenspun School of Journalism and Media Studies. Nontraditional forms of the thesis are allowed if they are consistent with the overall objectives of the program. An oral examination of the thesis is required.

Examination Track

In this track students complete a minimum of 36 credit hours of course work. No more than 12 hours may be taken outside the Hank Greenspun School of Journalism and Media Studies. Students then take a comprehensive examination which they have to pass. The examination is taken over a two-day period with the student writing for between four to six hours each day. An oral examination then follows. A Graduate Record Portfolio is also required, the specifics of which are outlined in a handbook developed by the school. The handbook is available upon request.

General Notes

1. The Graduate Coordinator is the temporary advisor for all new, incoming graduate students. Before completing 16 credit hours, the student selects a permanent advisor who mentors the student through the remainder of the program and guides them in the thesis or examination process.
2. Students are responsible for determining a program of study and submitting the proper paperwork to the Graduate college before they complete 16 credit hours of course work. The student's advisor and Graduate coordinator approve the program of study.
3. A passing grade in any graduate-level course is B- or better. Any course grade of C+ or lower will not be included in the student's degree program. All grades, pass or fail, are calculated to produce the student's GPA. Students can repeat a course to try to better a grade. To graduate, the master's student must have a GPA of 3.00 or higher in his or her accumulated course work.
4. A student who fails the oral examination for the thesis or the comprehensive examination is allowed to reschedule the oral examination no sooner than three months after the first attempt. Failure on the second attempt results in the student being separated from the program.
5. The Hank Greenspun School of Journalism and Media Studies matriculates graduate students only in the fall semester.
6. Review of applications begins March 15.
7. For additional information, check the school's website <http://www.unlv.edu/Colleges/Greenspun>.

Journalism and Media Studies

JMS 710 **3 credits**
Survey of Journalism and Media Studies

Introduction to graduate research writing including learning the proper technical aspects of academic writing; also surveys the fields of journalism and media studies and their interrelationships; past, present, and future issues; overview of the program. Prerequisite: Graduate standing.

JMS 711 **3 credits**
Qualitative Research Methods

Fundamentals of humanistic research methodologies; examines such methods as case study, ethnography, focus groups, interviews, visual methods, and other qualitative and critical research methods. Application and critique of the methods. Prerequisite: Graduate standing.

JMS 712 **3 credits**
Quantitative Research Methods

Fundamentals of scientific approach to research examined and applied; surveys, content analysis, and other methods appropriate to the study of journalistic and media messages, processes, and effects examined. Prerequisite: Graduate standing.

JMS 713 (Formerly COM 713) **3 credits**
Journalism and Media Historiography
Communications historiography explores use of historical methods in communications research and its relevant use

JMS 715 (Formerly COM 715) **3 credits**
Health Communication
Investigates relevant and contemporary theories of interpersonal, group, and mass communication as applied to the health care context. Topics include doctor-patient communication, media campaigns, and health and culture.

JMS 730 **3 credits**
Journalism and Media Theory
Explores and explains various media phenomena at a theoretical level. Surveys theoretical ideas, the nature of theory, specific theories in the field and those from other fields related to the discipline. Theory evaluation and metatheoretical issues. . Prerequisite: Graduate standing.

JMS 733 (Formerly COM 733) **3 credits**
First Amendment Theory
Examination of theory development on the meaning of the press and speech clauses of the First Amendment and how First Amendment theory has been reflected in legal decisions. Prerequisite: Consent of instructor.

JMS 739 (Formerly COM 739) **3 credits**
Special Problems in Media Production
Discussion and practical experience in production techniques of the mass media. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

JMS 760 (Formerly COM 760) **3 credits**
Effects of Mass Communication
Analysis of communication patterns and problems created by electronic media; special emphasis on media and message variables.

JMS 761 (Formerly COM 761) **3 credits**
Journalism and Media Policy and Regulation
In-depth examination of regulation and policy aspects of broadcasting with emphasis on legal research in telecommunications.

JMS 784 **3 credits**
The Media and Politics
Examines the relationship between the media and political leadership, policymaking, campaigns, and related issues. Looks at the mediation of political reality. Prerequisite: Graduate standing.

JMS 789 **3 credits**
Selected Topics in Journalism and Media Studies
Content varies with current developments in research in Journalism and Media Studies. May be repeated to a maximum of six credits with consent of instructor and department chair. Prerequisite: Consent of instructor.

JMS 794 **3 credits**
Special Readings

Content dependent upon the instructor's interest and expertise, as well as student interest and requirements. Course may be repeated to a maximum of six credits. Prerequisite: Graduate standing.

JMS 795 **1-4 credits**
Independent Study

Supervised study in subjects and projects determined in consultation with a faculty member. Students wishing to take this course must consult with the faculty member prior to registration. May be repeated to a maximum of six credits. Prerequisite: Faculty approval.

JMS 798 **3 credits**
Thesis

May be repeated but only six credits apply to the student's program. S/F grading only. Prerequisite: Graduate standing only.

The following courses are approved for use in graduate programs for master of Arts candidates in the Hank Greenspun School of Journalism and Media Studies. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

- COM 608 Mass Media Criticism
- COM 631 Visual Literacy
- COM 635 Mass Media Research Methods
- COM 681 Communication Law
- COM 684 Mass Media and Political Communication
- COM 685 Mass Media and Society
- COM 687 Ethics in Mass Media

Marriage, Family, and Community Counseling

(formerly the Department of Counseling)

Chair

Weeks, Gerald R. (1999), Professor; B.A., M.A., East Carolina University; Ph.D., Georgia State University.

Graduate Coordinator

Markos, Patricia A. (1992), Associate Professor; B.S., University of Wisconsin-La Crosse; M.S., Ph.D., University of Wisconsin-Madison.

Graduate Faculty

Ashley, Larry (2002), Assistant Professor in Residence; B.S. in Ed., M.A., Central Michigan University; Ed.S., University of Toledo.

Brinson, Jesse A. (1989), Associate Professor; B.A., Clark College; M.A., University of the District of Columbia; Ed.D., Western Michigan University.

Fife, Stephen (2003), Assistant Professor; B.S., M.S., Ph.D., Brigham Young University.

Hertlein, Katherine (2004), Assistant Professor; B.A., Truman State University; M.A., Purdue University; Ph.D.; Virginia Polytechnic Institute.

Peterson, Colleen M. (1999), Clinical Assistant Professor; B.S., M.S., Brigham Young University; Ph.D., Kansas State University.

Professors Emeriti

Emerson, Shirley (1984-2000), Emeritus Professor; B.A., Rice University; M.A., Ph.D., University of Michigan.

McBride, Martha (1975-1999), Emeritus Professor; B.A., M.Ed., University of Florida; Ed.D., University of Georgia.

The Department of Marriage, Family, and Community Counseling offers a Master of Science degree. Accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), the department offers degree programs in Community Counseling and Marriage and Family Counseling.

Counseling is a theory-based professional practice. Both specialty areas emphasize putting counseling theory into clinical practice. This includes supervised clinical experiences in the on-campus Center for Individual, Couple and Family Counseling and a 600-clock-hour internship in an appropriate community setting. A student may take either departmental program on either a full- or part-time basis (minimum of six credits or two courses), although the former is strongly encouraged.

Program faculty represent a wide spectrum of counseling approaches and are actively involved in research related to professional counseling. Students are encouraged to become informed consumers of counseling literature and research. The programs also emphasize the importance of personal growth of the student. Since personal qualities play a vital part in the determination of success as a counselor, opportunities are provided for the development of self-awareness, as well as an understanding of the effect one has upon others in interpersonal relationships.

The philosophy of the counseling faculty is based upon values incorporating belief in the worth and dignity of each individual, personal uniqueness and value and the freedom of the individual to be self-determined within a context of responsibility to others.

Community Counseling

The Community Counseling Master's Degree Program is a 54-semester hour course of study designed to train counselors to work in a community setting with persons experiencing a variety of concerns. These include career choices, developmental tasks, mental health issues, difficulties with addictions to substances or behaviors, and rehabilitation after any of a number of events such as accidents or illnesses resulting in emotional or physical disability. However, the main emphasis in this program is on addictions and rehabilitation counseling. Community counselors work in a wide range of settings, including state and county, rehabilitation, for-profit and nonprofit private agencies. Graduates of the community counseling program are eligible to become Certified Rehabilitation Counselors (CRC), after a post-master's internship under the supervision of a CRC. Upon certification they may practice privately. This is a national certification that is transferable to other states. Community counseling graduates are also eligible to be licensed in the state of Nevada as addictions counselors. The state of Nevada requires a master's degree and supervised clinical experience to become a licensed Addictions Counselor. The Community degree includes at least four courses in addictions and a portion of the clinical experience required for licensure.

Marriage and Family Counseling

The Marriage and Family Counseling Master's Degree Program is a 66-semester hour course of study providing a path toward qualification for licensure as a Marriage and Family Therapist (MFT) in Nevada. MFTs work with individuals, couples, families and groups on mental health, behavioral, personal and/or relational concerns. MFTs work in a wide range of settings, including public and private, for-profit and nonprofit agencies, hospitals and social service agencies. They may practice privately when licensed. Licensure is generally reciprocal with other states maintaining commensurate licensure (students are strongly encouraged to become familiar with licensing statutes for other states prior to moving). Students nearing the completion of their degrees may apply to sit for the licensing examination to the State of Nevada Board of Marriage and Family Therapist Examiners. When this examination has been successfully passed, the applicant becomes a Registered Marriage and Family Therapy Intern in the state of Nevada, eligible to practice under the direct supervision of an AAMFT Approved Supervisor or AAMFT Supervisor in Training (SIT). Further information on this process may be obtained by calling the board's offices. Students should be aware that *the state's post-master's internship and the department's pre-master's internships are in no way related*. The department does not offer nor otherwise sanction state internships.

Admission Requirements

The master's degree programs require that an application for admission be submitted to the Graduate College as well as transcripts of all college-level work. In addition, applicants are required to submit Graduate Record Examination (GRE) scores on both the Verbal and Quantitative sections of the general test. A minimum score of 450 is required on each and must have been taken within five years prior to submitting admission applications. A minimum grade point average of 2.75 for all undergraduate work and a 3.00 for the last two years of undergraduate work is required.

Applicants must provide three letters of recommendation directly to the department along with a departmental application form that includes a writing sample. Students should contact the department for specific application materials. Students are admitted once each year, with an application deadline of February 1. All programs begin in the summer.

Degree Requirements

To earn a master's degree, students must have a cumulative grade point average of 3.00 or better in the program. Those students who receive an F, or more than two Cs, will be separated from the program. A grade of B or better is required in COU 712 (or any practicum or internship) or the course must be repeated. The department requires a final examination for graduation, which can either be a comprehensive examination or a research thesis. Every student will be reviewed each semester to determine adequate progress and retention in the program. Degree programs are designed so that students take nine credit hours each semester: summer, fall and spring. Courses are offered in a particular sequence. Six credit hours must be taken each term: summer, fall and spring. Students who fall below the six-credit minimum may be separated from the program. A student who misses a course may lack prerequisites for their next courses, and, therefore, may need to wait for a course to be offered again in the next cycle. It is the responsibility of the student to discuss course sequencing and planned timing with their advisor. Not all courses are offered every semester. There are many courses that are offered only once each calendar year. Thus, it is imperative that in order to graduate in a timely way the students take the recommended number of credits and stay in sequence. Students may take up to five selected courses (see course prerequisite list) prior to formal admission. If admitted, these courses are eligible to count toward the degree.

Advanced Graduate Certificate Programs

The Department of Marriage, Family, and Community Counseling offers three advanced certificate programs. These programs and the admission requirements are described below. All certificate students are recognized by the Graduate College as Department of Marriage, Family, and Community Counseling Students.

Addictions Studies

The Advanced Graduate Certificate in Addictions Studies meets the needs of health professionals such as marriage and family therapists, community counselors, rehabilitation counselors, school counselors, physicians, psychologists, social workers, and behavioral health therapists by providing graduate addiction training to help them address client needs. The program is three pronged: 1. for students already enrolled in the community counseling program, the certificate program consists of 12 additional credits for four courses; 2. for students enrolled in the Marriage and Family Counseling program, the certificate consists of 18 credits or six courses, or 3. for students with a master's degree in another counseling specialty (i.e., school counseling) a counseling degree from another university, or a degree in psychology, or social work, the certificate consists of 24 credits or eight courses that can be completed in one year. Additional course work may be needed to meet state licensing requirements.

Rehabilitation Counseling

This certificate program is designed to meet the needs of the state of Nevada by building on the already existing Community Counseling Degree Program. This program is two pronged: 1. for students already enrolled in Community Counseling, the certificate program would normally consist of four additional courses and a Professional Paper; 2. for students with a master's degree in another counseling specialty (i.e., Marriage and Family Counseling, School Counseling, or a counseling degree from another university), the certificate program consists of 19 credits or six courses and a one-credit Professional Paper.

Marriage and Family Counseling

Applicants who have earned a Master's Degree in Counseling (or a related field), but who have not completed the requirements for licensure as delineated by the State of Nevada Board of Marriage and Family Therapists Examiners, may complete a course of study designed to comply with the state's requirements. Typically, Marriage and Family Counseling certificate students will complete a course very similar to that of the second year Marriage and Family Counseling degree students. The particular course of study for an individual will be determined in conjunction with the student's advisor and the requirements needed to meet state licensure. Typically, students take 24 semester credits or eight courses that can be completed in one year. Additional coursework may be needed to meet state licensing requirements.

Certificate Requirements

To earn a certificate, students must have a grade point average of 3.00 or better in each course. Students who receive an F or more than two Cs will be separated from the program. A minimum of six semester hours of credit must be taken each semester, including summer.

Admission Requirements for Degree and Certificate Programs

The master's degree programs require than an application for admission be submitted to the Graduate college and the Department of Marriage, Family, and Community Counseling as well as transcripts of all college-level work. In addition, the department requires applicants to submit Graduate Record Examination (GRE) scores on both the Verbal and Quantitative sections of the general test. A minimum score of 450 is required on each part of the exam, and the exam must have been taken within five years prior to submitting admission applications. A minimum grade point average of 2.75 for all undergraduate work and a 3.00 for the last two years of undergraduate work is required. Applicants must provide three letters of recommendation directly to the department along with a departmental application form that includes a writing sample. Final applicants undergo an extensive/structured personal interview. Students should contact the department for specific application materials and directions. Students are admitted once each year, with an application deadline of February 1. All programs begin in the summer.

Counseling

COU 700

1-6 credits

Special Problems: Counseling and Educational Psychology

Specialized instruction in general professional education designed to develop depth in understanding of current counseling and educational psychology problems. May be repeated to a maximum of six credits.

COU 701

3 credits

Introduction to Counseling

Introduction to the field of counseling including the study of history, philosophy, legislation, trends, purposes, ethics, legal aspects, standards, and professional roles of: community-agency counselors, rehabilitation counselors, marriage and family and school counselors. Examination of organizational structures of human service delivery systems, including public and private, for-profit and not-for-profit service delivery also covered.

COU 705

2 credits

Child Counseling

Focuses on children's position in and impact upon the family, emotional development, assessment of behavioral and emotional problems, adjustment issues at school and social/developmental situations. Models of counseling children, models of parent education, and models of parent and school interaction, ethical and legal responsibilities in regard to children, and current research presented. Prerequisite: Graduate standing or consent of instructor.

COU 710 Counseling the Older Adult	3 credits	COU 731 Crucial Issues and Treatment Programs in Substance Abuse	3 credits
Targets on the use of human relations and counseling techniques with elderly citizens who may have coping or adaptation problems. Emphasis on problems related to aging. Prerequisites: COU 701, EPY 751, or consent of instructor.		Physical and psychological aspects of substance abuse and other addictions, specific counseling and treatment approaches.	
COU 711 Issues in Counseling Women	3 credits	COU 734 Appraisal in Counseling	3 credits
Developmental patterns in women. Changing roles of women; sexist bias and nonsexist counseling; existing counseling approaches and their impact on various female populations; examination of subcultures within the female group. Prerequisite: COU 701 or consent of instructor.		Theoretical and practical approach to assessing the individual. Includes development of framework for understanding individual and group testing in behavioral health; data gathering methods; case study approaches; and individual differences including ethnic, cultural, and gender considerations. Prerequisite: COU 701.	
COU 712 Counseling Process and Procedures	3 credits	COU 736 Orientation to Marriage and Family Counseling	1 credit
Students learn the necessary skills to establish counseling relationships, identify relevant counseling issues, and translate their understanding into an action plan for promoting lasting change. The stages of the counseling process identified, practiced, and applied. Prerequisites: COU 701; graduate standing.		Provides information concerning the professional role, function, history, philosophy and practice of counseling. Role of the marriage and family counselor in community, educational, and business settings, as well as their interactive relationship with other professionals. Taken no later than two semesters following admission to the program. Prerequisites: COU 701 and admission to the department.	
COU 713 Gender Issues in Counseling	3 credits	COU 737 Seminar: Crucial Issues in Counseling	3-6 credits
Survey of gender issues for adult men and women, which impact counseling concerns such as relationships, work, and lifestyles. Prerequisite: Graduate standing.		Analysis of significant issues in counseling of current and continuing concern. Examination of historical, social, legal and philosophical dimensions of selected problem areas. May be repeated once for credit.	
COU 715 Personal and Group Processes	3 credits	COU 738 Foundations of Community and Rehabilitation Counseling	3 credits
Group dynamics and procedures; emphasis on personal growth, examination of personal attitudes and values, and group membership.		Introduction to community and rehabilitation counseling including historical, philosophical legislative and organizational bases; rehabilitation process, and services in public and private community settings. Emphasis on role and function of the counselor.	
COU 719 Sexual Issues in Counseling	3 credits	COU 739 Vocational Placement and Community Resources	2 credits
Basic knowledge, theory, and interventions part of helping clients deal with sexual issues. Introduces methodology of conducting sexual assessment interviews as well as structuring and implementing treatment strategies for a variety of issues including: sexual dysfunctions, victims of abuse and sexual assault, elective varieties of sexual behavior, aging, disabilities, and transmitted diseases. Prerequisites: EPY 751 or COU 756 (or equivalent) and COU 753.		Study of vocational placement techniques along with an understanding of community resources including community organizational theory and criteria for use of such facilities in the vocational adjustment and placement of the disabled and disadvantaged. Prerequisite: COU 747.	
COU 725 Multicultural Counseling	3 credits	COU 740 Career Theories and Practices	3 credits
Provides principles, procedures, and techniques of counseling with multicultural populations. Emphasis on establishing communication with individuals representing diversified cultures. Offering of action-oriented guidance relevant to various cultural lifestyles.		(Same as EPY 740.) Survey of current theories and practices in career counseling. Emphasis on values and the decision-making process. Meets program requirements for school, community, and rehabilitation counseling.	

<p>COU 741 3 credits Assessment, Treatment, and Case Management in Addictions Provides theoretical framework for assessing and treating individuals with addictive disorders and the practical application of managing a client’s case from initial treatment stages through discharge and aftercare. Prerequisite COU 731.</p>	
<p>COU 743 3 credits Introduction to Community Counseling Provides information concerning the professional role, function, history, philosophy and practice of counseling. Role of the community-agency counselor in community, clinical, education, and business settings, as well as their interactive relationship with other professionals. Normally taken no later than two semesters following admission to the program. Prerequisites: COU 701 and admission to the department.</p>	
<p>COU 746 3 credits Supervised Practicum in Group Counseling Supervised practice in counseling with small groups in a variety of settings. May be taken concurrently with EPY 744. Prerequisites: COU 701, 747 and 753 and EPY 724, or equivalent.</p>	
<p>COU 747 3 credits Supervised Practice in Counseling Beginning counseling practicum. Direct observation, feedback, and experience in individual counseling. Prerequisites: COU 701, 712 (with minimum grade of B), 753, 771 (concurrent).</p>	
<p>COU 749 3-6 credits Thesis May be repeated but only six credits applied to the student’s program. S/F grading only. Prerequisite: COU 779.</p>	
<p>COU 751 3 credits Planning, Management, and Evaluation of Addictions Programs Develops skills in applying basic management, planning, and evaluation techniques to addictions programs. Areas stressed include the relationships between program evaluation and program planning and program effectiveness and organizational performance. Prerequisite: COU 741 or consent of instructor.</p>	
<p>COU 753 3 credits Counseling and Consultation Theories Survey of theoretical approaches and techniques used in counseling individuals; theories and applications used by counselors in consultations. Prerequisite: COU 701, graduate standing.</p>	
	<p>COU 754 3 credits Supervised Group Practice and Theory <i>(Same as EPY 754.)</i> Group theory and practice as it relates to leadership of personal growth, counseling, and therapeutic groups. Emphasis placed on leadership functions as they relate to group processes. Prerequisites: COU 715, 747, and 753.</p>
	<p>COU 755 3 credits Advanced Counseling Theories Intensive exploration of current and historical developments in the field of counseling. Emphasis on the major systems and applications together with the current research in these areas. Prerequisites: COU 747 and COU 753.</p>
	<p>COU 756 3 credits Human Development, Medical Aspects and Psychopharmacology of Disabilities Study of human growth and development of individuals across the lifespan, major body systems and disabilities to which they are subject, and psychopharmacological ramifications of each. Focus on etiology, symptoms, rehabilitation treatment, vocational implications, and associated counseling challenges.</p>
	<p>COU 758 1-12 credits Individual Instruction Selected basic problems related to the field of counseling services. a) Testing. b) Curriculum. c) Supervision. d) Counseling. e) Area Problems. f) Research. May be repeated to a maximum of 12 credits.</p>
	<p>COU 759 3 credits Family Dynamics Study of family factors as they relate to personal adaptability. Application of research and practice in family counseling relative to the interpersonal problems of adults and children. Prerequisites: COU 701 (concurrent).</p>
	<p>COU 761 1- 3 credits Technology and the Internet in the Social Science, Research & Practice Explores role of technology in changing society, application of technology to field of social sciences, research and practice, and limitations and concerns about technology in the helping profession. May be repeated to a maximum of three credits. Prerequisites: COU 701.</p>
	<p>COU 762 3 credits Appraisal and Diagnosis in Counseling Overview of practical and theoretical aspects of assessment and diagnosis of behavior in counseling practice. Review of basic psychometrics necessary for counselors such as validity, reliability, elementary statistics, and test score interpretation. Survey of assessment instruments and techniques commonly used in counseling practice. Prerequisite: COU 753 or consent of instructor.</p>

COU 763 **Family Systems Theory** **3 credits**

In-depth analysis of general systems theory as it applies to counseling, especially with multi-person client systems such as couples and families. Major concepts, philosophical foundations, and pragmatic implications of using systematic principles in counseling. Prerequisites: COU 753, 759 (concurrent) or consent of instructor.

COU 764 **Principles and Practice of Marriage and Family Therapy I** **3 credits**

Focuses on the process of family therapy. Beginning skills necessary for family counseling. Theoretical foundations in systems theory as well as each of the major models of family therapy. Prepares students to assess families and conduct family counseling from variety of approaches. Prerequisites: COU 759, COU 763.

COU 765 **Principles and Practices of Marriage and Family Therapy II** **3 credits**

Focuses on contemporary family theories and approaches, including marital counseling theories and models. Advanced understanding of assessment, applications of current research and outcomes, professional and ethical issues, and clinical marital issues included. Prerequisite: COU 764.

COU 766 **Psychological Aspects of Dysfunctional Behavior** **3 credits**

Examination of personal, social and cultural aspects of emotional and physical disabilities. Review of the use current diagnostic systems, dysfunctional behavior and treatment planning within counseling framework. Prerequisites: COU 741, 753.

COU 768 **Pre-practicum Laboratory in Counseling** **1 credit**

Laboratory practice in counseling theory and techniques. Must be taken concurrently with EPY 753. Prerequisites: COU 701, EPY 704 and admission to the department.

COU 770 **Advanced Supervised Practice in Counseling** **3 credits**

Advanced counseling practice, emphasis on work with individuals and groups in specialized settings such as community agency or rehabilitation. May be repeated to a maximum of six credits. Prerequisite: COU 747.

COU 771 **Ethical and Legal Issues in Counseling** **3 credits**

Examination of professional organizations, their methods of change, ethical and legal standards, their evolution and application to a variety of professional activities. Corequisite: COU 747 or equivalent and consent of instructor.

COU 772 **Counseling and Spirituality** **3 credits**

Application and integration of sound counseling skills into a spiritually-based counseling approach. Contemporary counseling theories and their assumptions about human nature and the role of spirituality in counseling. Prerequisite: Consent of instructor

COU 773 **Advanced Family Practicum** **3 credits**

Advanced counseling experience with couple and families. Must be repeated for a minimum of six credits. Prerequisites: COU 747, 764 (concurrent).

COU 776 **Internship in Counseling** **1-3 credits**

Internship is the final activity in students' programs and is intended to provide them with the opportunity to engage in all of the activities of a regularly employed staff member in an organization compatible with their program emphasis area. Internship activities take place at community sites where interns can work with clients appropriate for their program emphasis. Prerequisites: COU 770 or COU 773 and departmental approval.

COU 777 **Marriage Counseling** **3 credits**

Specialized approaches to resolving adult relationship problems. Theoretical issues specific to marriage counseling. Relationship appraisal techniques. Evaluating outcomes of marriage counseling. Ethical issues. Prerequisites: COU 747, 753, 759 and consent of instructor.

COU 779 **Counseling Research Seminar** **3 credits**

Seminar in the application and integration of counseling outcome and process research into practice. Emphasis on developing the knowledge necessary to understand the results of and apply the methods of counseling research through an exploration of applied research methods, and relevant research findings. Prerequisite: Graduate standing.

COU 782 **Counseling with Potential Suicides** **3 credits**

Emphasis on the helping skills to facilitate communication with the potential suicide. Principles and techniques to facilitate client self exploration that encourage self understanding and alternate actions. Prerequisite: COU 754 or consent of instructor.

COU 783 **Counseling and Child Abuse** **3 credits**

Specified counseling procedures with the child abuser or abused child. Study etiology of the phenomenon of child abuse. Study of factors and their interpretation to facilitate intervention models and resources to meet client objectives. Prerequisites: COU 759, 753 or consent of instructor.

COU 787 **1-7 credits**
Individual Research
 Selected basic problems in personnel services. Prerequisite: COU 779.

COU 788 **1-6 credits**
Seminar in COU/EPY
 (Same as EPY 788.) Selected topics in counseling and human development services. a) Principles and practices. b) Individual analysis. c) Occupational information. d) Placement. e) Follow-up evaluation. f) Research. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

COU 789 **3 credits**
The Student in Higher Education
 Theory and practices related to counseling college students. Emphasis on both traditional and nontraditional approaches to meeting the needs of students at various types of postsecondary institutions. Interrelationship of student and institutional needs within the environment of higher education.

COU 793 **3-6 credits**
Advanced Doctoral Practicum
 Intense supervision with a restricted client load. Enrollees synthesize and translate clinical skills in supervisory role. Restricted to doctoral candidates. May be repeated to a total of six credits.

COU 799 **3-24 credits**
Dissertation
 Culminating experience that may be: a) traditional, original research, b) field oriented and problem solving, or c) exploratory or generative research. Limited to doctoral candidates. 3-24 credits in increments of 3.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

COU 661 Use and Application of Technology
 in Counseling
 COU 699 Special Topics

School of Public Affairs

The School of Public Affairs was created to assist the College of Urban Affairs in its mission to prepare community leaders and address pressing societal issues. The school does this primarily through interdisciplinary activities including policy forums and the offering of a Ph.D. in Public Affairs. The Departments of Public Administration, Communication Studies, and Criminal Justice are components of the school.

Doctor of Philosophy

The Ph. D. in Public Affairs is an interdisciplinary degree drawing upon the faculty throughout the college including the departments of Public Administration, Communication Studies, Criminal Justice, Environmental Studies, and the School of Social Work. The Mission of the Ph.D. in Public Affairs is to serve as the nexus between the academic community and the world of service and practice in the private, non-profit, and public sectors.

The degree will prepare individuals to study issues facing society in the context of public, private, and non-profit organizations and institutions. Students entering the program will have the ability to follow two career paths: 1. to conduct research, consult, and serve as analysts within and to organizations; or 2. to enter the academic world at the college or university level.

The degree program is designed to increase an individual's ability to undertake significant research to increase society's understanding and knowledge in order to both serve the community and inform the development of public policy. The degree program will provide for significant interaction between students and faculty in learning, research, and the application of expertise to community issues. In addition, the degree will prepare those students interested in entering the academic world with the knowledge, skills, and abilities to be successful teachers and researchers at the college and university level.

The program will provide students with carefully supervised teaching experience as graduate assistants; offer mentoring in research and publication through graduate seminars; and mentor them in attending professional meetings and presenting papers.

Admission Requirements

Admission to the program is done only in the fall semester. Applicants should check the School of Public Affairs and the Graduate College web sites for the specific application deadline.

Admission requirements include:

1. Completed Graduate College Application.
2. An earned master's degree (or another advanced graduate degree, i.e. J.D.) with a minimum GPA of 3.50.
3. Three letters of reference including one letter from an individual who can evaluate the applicant's ability to conduct graduate work at the Ph.D. level. A second letter of reference must come from someone who has supervised the candidate in a work setting.

4. A current resume.
5. A statement of purpose explaining the applicant's career goals and why the doctorate would enhance the likelihood of achieving those goals. The statement should also explain why the applicant believes that he or she is qualified to conduct academic work at the advance graduate level. Finally, the statement should address the specific area of specialization the student would like to emphasize.
7. A writing sample from previous graduate work or a significant publication completed in the work setting that is directly attributable to the applicant.
8. A satisfactory GRE score (the expected minimum score is a combined minimum of 1,000 for the verbal and quantitative sections; equivalent LSAT scores would be acceptable).
9. Students may be asked to meet with a member of the admission committee for a personal interview.

Degree Requirements

A minimum of 46 credits beyond the master's degree level is required. Credit distribution is in four areas. The four areas include:

1. Public Affairs Core required courses. The four courses include:
 - a. PAF 700: Public Programs (3 credits).
 - b. PAF 701: Role of Government in Society (3 credits).
 - c. PAF 703: Individual and Group Decision-Making (3 credits)
 - d. PAF 704: Public Affairs as a Profession (1 credit)
2. Analytical Studies Core. Students are required to take twelve credits in research methods and analysis. The following two courses are required of all students:
 - a. PAF 710: Advanced Research Design
 - b. PAF 711: Advanced Seminar in Quantitative Research in Public Affairs

The remaining six credits will be selected by the student with the approval of his or her advisor. Optional courses should be selected to enhance the individual's ability to conduct research in the student's area of interest.
3. Area of Specialization: Students must take twelve credits at the 700 level in a specific area of interest. Courses may be taken from more than one department. Approval of the plan of study in the area of concentration must be received before taking any course. Examples of area of specialization include: Social Policy, Public Management, Criminal Justice, Communications and Public Discourse, Human Resource Management, and Program Evaluation.
4. Dissertation: Students are expected to write a dissertation demonstrating both knowledge of a specific topic and the ability to conduct high quality original research. Students enroll in six credits of dissertation work each semester they are working on the dissertation. The minimum number of dissertation credits required for graduation is twelve.

Examinations

Students will take the equivalent of four exams before completing the degree. At the end of the core public affairs course work and the analytical studies work, students will take exams in each area. A student must pass both written comprehensive exams to remain in the program. Exams are expected to be taken at the end of the third semester of course work.

The equivalent of a third exam will be taken by the student when the student completes and defends the dissertation prospectus. The prospectus should demonstrate a thorough knowledge of the subject area under investigation and a detailed plan on how the student will conduct her/his original research.

Students, on completion of their dissertation, will present their findings to the public (and their Examination Committee) and orally defend the research.

General Information

In the first three semesters, and the intervening summer, students in the program enroll in courses as a cohort. Except for one semester where the students take seven credits, all students must enroll in the designated six credits. Students will, in conjunction with the Ph.D. Program Coordinator, obtain an advisor who will be the lead member of the student's Doctoral Examination Committee.

Students should be aware that the Graduate College limits course work for a degree to six years.

Students should obtain a copy of the Graduate College handbook for graduate students available on the Graduate College web site as well as the School of Public Affairs Graduate Handbook. The School of Public Affairs' Handbook contains additional information concerning requirements and regulations for satisfactory progress in the Program.

PAF 703 3 credits Individual and Group Decision Making

Explores how different academic disciplines view individual and group decision-making under uncertainty. Analysis of how individuals and groups make decisions, and different notions about how they should act when faced with risk and uncertainty. Prerequisite: Admission into program.

PAF 710 3 credits Theory and Design of Research

Designed to develop in students the role of theory in designing research applicable to issues studied in public affairs. Beginning course in the Public Affairs Ph. D. program's analytical studies sequence. Prerequisite: Admission into program.

Entire list of courses and their descriptions not available at time of publication.

Communication Studies

Chair

Burkholder, Thomas R. (1999), Associate Professor; B.S.E., M.A., Emporia State University; Ph.D., University of Kansas.

Graduate Coordinator

Henry, David (1998), Professor; A.B., University of California, Berkeley; M.A., University of California, Davis; Ph.D., Indiana University.

Graduate Faculty

Bevan, Jennifer L. (2003), Assistant Professor; B.A., M.A., University of Delaware; Ph.D. University of Georgia.

Conley, Donovan S. (2004), Assistant Professor; B.A., University of Lethbridge, Alberta; M.A., Ph.D., University of Illinois

Engstrom, Erika (1991), Associate Dean, College of Urban Affairs; B.A., M.A., University of Central Florida; Ph.D., University of Florida.

Watson, Martha (1997), Professor and Dean, College of Urban Affairs; B.A., Rice University; M.A., Ph.D., University of Texas at Austin.

Professors Emeriti

Blythin, Evan (1969-1998), Emeritus Associate Professor; A.A., Palomar Junior College; B.A., M.A., San Diego State University; Ph.D., University of Colorado.

Jensen, Richard Jay (1992), Professor and Senior Advisor to the President; B.S., Weber State College; M.A., University of Arizona; Ph.D., Indiana University.

Nielsen, Stephen F. (1969-1998), Emeritus Associate Professor; B.S., Ricks College; M.S., Ph.D., Southern Illinois University.

The Department of Communication Studies offers the Master of Arts degree, in Communication Studies, with emphases in interpersonal, organizational, and rhetorical studies. Courses of study are designed both for students with a career orientation — in such diverse arenas as, politics, education, law, public service, the ministry, and media relations — and for those who aspire to continue their education in doctoral programs.

All students are required to take three introductory courses: survey of graduate studies, qualitative research methods, and quantitative analysis (COM 710, 711, and 712). Graduate teaching assistants are required to take an additional course in college teaching in communication in their first semester (COM 725). Yet because each student's goals are unique, the curriculum allows flexibility in developing individual degree programs. Such development aims to balance the communication discipline's varied traditions in theoretical, historical, and applied research, with particular attention to the changing communication culture of the twenty-first century.

Admission Requirements

In addition to the general requirements for admission to the Graduate College, the school typically requires:

1. A minimum GPA of 3.00 in the last 90 credit hours of undergraduate course work.
2. Satisfactory scores on the verbal and quantitative sections of the Graduate Record Exam.
3. At least three letters of recommendation from individuals who are competent to discuss the applicant's intellectual ability and promise as a graduate student. Two of these letters should come from professors or college-level instructors.
4. A brief description (one or two pages long) of the applicant's goals and expectations in pursuing graduate study in communication.
5. A sample of the applicant's writing. This could be a paper from an undergraduate course or something similar.

Degree Requirements

All students enrolled in the program are required to complete core courses in their first year: COM 710, Survey of Communication Studies, COM 711, Research Methods I, COM 712, Research Methods II.

Graduate teaching assistants are required to take an additional course in their first semester: COM 725 College Teaching in Communication

Students have the choice of doing original research leading to the writing of a thesis or completing a program of course work leading to a comprehensive examination. Programs of study are designed to meet the student's individual professional or personal objectives. Although an undergraduate degree in communication is not required for admission to the program, a student without a background in communication may be required to complete course work in addition to the minimum requirements.

Thesis Track

A student must complete a minimum of 30 credit hours of approved course work plus six hours of thesis credits. The classes may include six credits outside the Department of Communication Studies. An oral examination on the thesis is required.

Examination Track

A student must complete a minimum of 36 credit hours of approved course work. No more than nine hours may be taken outside the Department of Communication Studies. Students must pass a comprehensive written examination. The examination lasts eight hours and is given over two consecutive days. A *Graduate Education portfolio* is also required of exam track students (the specifics of the portfolio are outlined in the *Department of Communication Studies Graduate Handbook*, which is available upon request).

General Notes

1. The Graduate Studies Coordinator will be the advisor for all entering students. Before completing 16 credit hours, the student should select a permanent advisor. The permanent advisor will work with the student through the completion of the program. The student's advisor must approve all course work.
2. All students must submit a program of study, including all proposed course work, to the Graduate College before the completion of 16 credit hours. The student's advisor and Graduate Studies Coordinator must approve the program and any changes to the program.
3. Acceptable course work is defined as any class in which a student receives a grade of B- or higher. Any course graded C+ or below will not be included in the candidate's degree program.
4. A student who fails the oral examination for the thesis or the comprehensive examination will be allowed to take another examination. There must be a period of at least three months between examinations.
5. The Department of Communication Studies accepts applicants only in the fall semester of each year.
6. Review of applications starts March 15.

Communications

COM 706 3 credits

Seminar in Intercultural Communications

Study of theoretical, methodological, practical and service foundations of intercultural communication. Examines complexities and implications of the relationship of culture and communication.

COM 710 3 credits

Survey of Communication Studies

Survey of communication disciplines and their interrelationships; past, contemporary, and emerging issues; appropriate research topics, questions, methods, and style.

COM 711 3 credits

Research Methods I

Fundamentals of critical philosophy, theory and practice, writing and critiquing research reports.

COM 712 3 credits

Research Methods II

Fundamentals of scientific philosophy, research design, and data analysis; writing and critiquing research reports.

COM 725 3 credits

College Teaching in Communication

Discussion of theory and practice in the teaching of communication in college, particularly entry-level courses. Required of all graduate teaching assistants. Prerequisite: Graduate standing.

COM 730

3 credits

Theories of Communication

Exploration and explanation of communication phenomena. Survey of theoretical ideas, nature of theory in general, major communication theories and theories relevant to communication, and examines purpose of theory in communication research. Prerequisite: Graduate standing.

COM 741

3 credits

Social Movements as Rhetorical Form

Rhetorical approaches to the study of social movements, examining communicative processes and symbolic action involved in social change. Focuses on theoretical and methodological issues in movement studies as well as on rhetorical documents and practices of several social movements. Prerequisite: Consent of instructor.

COM 780

3 credits

Persuasion

Study of theories and applications of persuasion in various fields of social, political, business, religious, and educational activities.

COM 781

3 credits

Seminar in Argumentation

Examines field of argument from its roots in classical Aristotelian rationalism to modern practical reasoning perspectives. Argumentation in interpersonal and public contexts emphasized. Prerequisite: Consent of instructor.

COM 784

3 credits

Political Communication

Study of relationship of rhetorical communication theory to political discourse. Focus on political campaigns, presidential rhetoric, and media influences.

COM 789

3 credits

Selected Topics in Communication

Content varies with current developments in communication theory. May be repeated to a maximum of six credits with instructor's permission. Prerequisite: Consent of instructor.

COM 794

3 credits

Special Readings

Content dependent upon the instructor's interest and expertise, as well as student interest and requirements. Course may be repeated to a maximum of six credits.

**COM 793 (Formerly COM 795) 1-4 credits
Independent Study**

Supervised study and practical experience in subjects and projects determined in consultation with a faculty member. Students wishing to take this course must consult with the faculty member prior to registration. May be repeated to a maximum of six credits.

COM 797 (Formerly COM 798)

3 credits

Thesis

May be repeated but only six credits applied to the student's program. S/F grading only.

The following courses are approved for use in graduate programs for Master of Arts candidates. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

COM 604 Principles of Persuasion

COM 607 Communication Between the Sexes

COM 684 Mass Media and Political Communication

Criminal Justice

Chair

Lieberman, Joel (1997), Associate Professor; B.A., State University of New York at Stony Brook; M.A., Ph.D., University of Arizona.

Graduate Coordinator

Lu, Hong (1998), Associate Professor; LL.B., Law School, Fudan University; M.A., Indiana University; Ph.D., Arizona State University.

Graduate Faculty

McCorkle, Richard (1990), Associate Professor; B.A., University of North Carolina; M.A., Ph.D., Vanderbilt University.

Miethe, Terance D. (1993), Professor; B.A., Western Washington State College; M.A., Western Washington University; Ph.D., Washington State University.

Shelden, Randall G. (1977), Professor; B.A., California State at Los Angeles; M.A., Memphis State University; Ph.D., Southern Illinois University at Carbondale.

Sousa, William (2004), Assistant Professor; B.A., Stonchill College; M.S., Northeastern University; Ph.D., Rutgers University.

The Department of Criminal Justice offers a broad-based graduate program leading to the Master of Arts degree. The program addresses issues of crime and criminal justice within an analytical framework and emphasizes theory and research and their implications for social policy. The curriculum is grounded in the social and behavioral sciences and in legal approaches to crime and social control. It draws from contemporary research and theoretical developments across a spectrum of academic disciplines.

The graduate program in criminal justice offers two degree options. The Traditional Master of Arts degree is designed to prepare students for doctoral studies in the field and in related areas of the social and behavioral sciences. Those who obtain this degree may also assume teaching positions at the community college level. The Professional Master's degree is designed to serve the needs of professionals currently working in justice-related agencies by providing the knowledge and skills to enhance their performance in current positions and/or prepare them for career advancement. Both degrees require a minimum of 36 semester hours of study. Students enrolled in the Traditional Master of Arts degree track are required to complete a scholarly thesis. Students seeking the Professional Master's degree must pass a comprehensive examination.

Traditional Master of Arts Degree Program

The Traditional Master of Arts degree program is designed to improve a student's understanding of the nature, causes, and consequences of crime and crime control. Based on the tradition of the liberal arts, the program emphasizes the symbiotic relationship between crime and the structure of society and the interplay between criminal justice theory and practice. These relationships are explored through course

work in criminological theory, law and social control, the administration of justice, and crime and public policy. By completing the requirements for this program, students will be prepared for teaching at the community college level and doctoral study in crime and criminal justice.

Admission Requirements for the Traditional Master of Arts Degree Program

1. An undergraduate degree in criminal justice or related social or behavioral science with at least a 2.75 GPA is required for admission to the program. Students with less than the minimum required GPA may be admitted on a one-year probationary status. To continue in the program, probationary students must maintain a 3.00 GPA during the first year of enrollment. The Graduate Record Examination (GRE) is not required for admission, but strongly encouraged.
2. A Criminal Justice Graduate Program Application Cover Page (obtained from the department) must be completed.
3. A statement of purpose for pursuing the Master of Arts Degree, addressing the student's particular interests in the field of criminal justice and his or her future academic and/or professional goals, must be provided at the time of application.
4. Two letters of recommendation are required from former professors or other professionals who can evaluate the applicant's ability to do graduate-level work in criminal justice.
5. Application forms, fees, official transcripts, test results and assistantship applications are submitted to the Graduate College. Submit an additional copy of official transcripts, the two letters of recommendation, and the statement of purpose, along with the Application Cover Page, directly to the department.
6. International Students. Applicants who are citizens of a country where English is not the native language must show competency in the English language. As part of the entrance requirements, they must take the "Test of English as a Foreign Language" (TOEFL) and receive a minimum score of 550 (written) or 213 (computerized). International applicants must also submit a completed financial statement before their application can be reviewed and should check with the Graduate College regarding application procedures.

Degree Requirements for the Traditional Master of Arts Degree Program

1. Completion of 36 credits of graduate study at the 600 and 700 levels.
2. Completion of CRJ 700, 701, 702, 703, 704, and 705. An additional six credits in elective, graduate-level criminal justice courses are required. A maximum of nine credits of 600-level course is allowed.
3. Students may elect up to six credits of approved graduate study in other social or behavioral sciences or in graduate programs formally approved by the Department of Criminal Justice.
4. All students enrolled in the Traditional Master of Arts Degree Program in Criminal Justice are required to write a thesis. The thesis will be written under the direction of

a committee of three graduate faculty and chaired by a member of the faculty in Criminal Justice. One member of the thesis committee is a graduate faculty member from outside the Department of Criminal Justice. Six credits of graduate work (797) will be awarded upon successful completion of the thesis.

5. Upon completion of the course work and thesis, an oral examination related to the general field and thesis is required of all students. The examination will be administered by the student's thesis committee and a representative from outside the department chosen by the Graduate College. The oral examination will assess 1. the student's competency in defending the substantive, theoretical, and methodological topics covered by the thesis and 2. his or her general knowledge, including the ability to integrate topics covered by core and elective criminal justice classes and to apply core fundamentals to important issues.
6. Consistent progress toward the degree and maintenance of a cumulative 3.00 grade point average are required for continuation in and completion of the program.

Professional Master's Degree Program

Designed for the full-time criminal justice professional, the Professional Master's Degree Program in Criminal Justice provides students with advanced knowledge of the nature of crime, criminal justice institutions and processes, current criminal justice policy and training in research methods, statistics, and program evaluation. The program will also be open to students seeking a terminal master's degree and a career in the criminal justice system. Upon completion of the program, students will have furthered their understanding of crime, the criminal justice system, and be able to conduct evaluations of policies and programs within various agencies in the justice system. This program is structured so that enrolled students can complete the program in two years of part-time study (six credit hours per regular semester and six credit hours during the summer sessions). Recognizing most full-time professionals have schedules that often preclude attendance during regular class times, the program utilizes a variety of distance education techniques, including prerecorded and compressed video, and online instruction.

Admission Requirements for the Professional Master's Degree Program

1. An undergraduate degree in criminal justice or related social or behavioral science with at least a 2.75 GPA is required for admission to the program. Students with less than the minimum required GPA may be admitted on a one-year probationary status. To continue in the program, probationary students must maintain a 3.00 GPA during the first year of enrollment. The Graduate Record Examination (GRE) is not required for admission.
2. A Criminal Justice Graduate Program Application Cover Page (obtained from the department) must be completed.
3. A Statement of Purpose for pursuing the Professional Master's Degree, addressing the student's particular interests in the field of criminal justice and his or her

professional goals, will be provided at the time of the student's application.

- Two letters of reference from agency supervisors, department heads, or former professors.
- Application forms, fees, and official transcripts are submitted to the Graduate College. Submit an additional copy of official transcripts, the two letters of recommendation, and the statement of purpose, along with the Application Cover Page, directly to the department.
- International Students. Applicants who are citizens of a country where English is not the native language must show competency in the English language. As part of the entrance requirements, they must take the "Test of English as a Foreign Language" (TOEFL) and receive a minimum score of 550 (written) or 213 (computerized). International applicants must also submit a completed financial statement before their application can be reviewed and should check with the Graduate College regarding application procedures.

Degree Requirements for the Professional Master's Degree Program

- Completion of 36 credits of graduate study at the 600 and 700 levels.
- Required courses are CRJ 700, 702, 703, 705, and one course from either one of the following areas: 1. Criminology (CRJ 701, 706, 709, 710, 713, and 714); and 2. Criminal Justice Institutions (CRJ 704, 707, 708, 712, 715). An additional nine credits in elective, graduate-level criminal justice courses are required. A maximum of nine credits of 600-level course is allowed.
- An additional nine credits of electives from the prescribed list of noncriminal justice courses are required for the degree. Students may fulfill elective non-CRJ requirement with additional graduate studies in criminal justice.
- All students enrolled in the Professional Master's Degree in the Professional Master's Degree in Criminal Justice will be required to pass a comprehensive examination. Three credits of graduate work (CRJ 796) will be awarded upon successful completion of the examination.

Criminal Justice

CRJ 700 **3 credits** **Proseminar in Criminal Justice**

Provides an introduction to graduate studies in Criminal Justice. Students are exposed to information regarding the main components of the criminal justices system, including: law enforcement, courts, and the correctional system. Prerequisite: Graduate standing in criminal justice.

CRJ 701 **3 credits** **Proseminar on Theory**

History of criminological thought. Contemporary and classical theories of crime. Attention to social, cultural, and psychological perspectives. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 702 **3 credits** **Proseminar on Research Methods**

Methods and applications of quantitative and qualitative research. Relationships among theory, research, and social policy. Development and interpretation of research reports. Prerequisites: Graduate standing in criminal justice or consent of instructor and satisfactory completion of an undergraduate course in research methods.

CRJ 703 **3 credits** **Proseminar on Statistics**

Univariate and multivariate techniques. Use of computerized statistical packages in the social and behavioral sciences. Practical applications in statistical problem-solving using primary and secondary data sources. Prerequisites: Graduate standing in criminal justice or consent of instructor and satisfactory completion of an undergraduate statistics course.

CRJ 704 **3 credits** **Proseminar on Law and Social Control**

Nature of law and legal institutions. Relationships between law and other forms of social control. Theory and research on the development and implementation of law. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 705 **3 credits** **Proseminar on the Administration of Justice**

Structures, functions, and operations of criminal justice organizations. Formal and informal organizational structures and their relationships to the broader social, political, and legal institutions. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 706 **3 credits** **Seminar on the Nature of Crime**

Investigation of selected theoretical perspectives and particular types of crime and criminality. Specific subject matter varies by semester. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 707 **3 credits** **Policing**

Police organization and subculture, occupational socialization, police community relations, occupational deviance, policy formation, and related issues discussed. Specific subject matter varies by semester. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 708 **3 credits** **Seminar on Law and Legal Process**

Development and implementation of criminal law. May focus on issues related to the legislative process, the criminal courts, case law, and legal reform. Specific subject matter varies by semester. May be repeated to a maximum of six credits. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 709 **3 credits**
Delinquency and Juvenile Justice

Historical development and current practices of juvenile courts and treatment institutions. Emphasis on the relationship between delinquency theory, research, and policy formulation, with particular attention to programs of delinquency prevention. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 710 **3 credits**
Crime and Its Control in Gambling

Analytical approach to patterns of gambling in America, nature of organized crime involvement, and development and implementation of forms of social control of organized crime in the area. Particular attention given to patterns of crime and regulatory control in Nevada gambling. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 711 **3 credits**
Criminological Research

Correlates of crime and theory-based research on crime causation. Implications for the major theoretical perspectives. Prerequisites: CRJ 701 and CRJ 702, graduate standing in criminal justice or consent of instructor.

CRJ 712 **3 credits**
Punishment and Corrections

Philosophies and practices of punishment and corrections. Contemporary theory, the prison environment, work and rehabilitation programs, parole, overcrowding, capital punishment, and alternatives to imprisonment. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 713 **3 credits**
Victimization

Problems confronted by victims of crime. The role of the victim in criminal offenses. Policy, advocacy issues, and victims' rights. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 714 **3 credits**
Theory Construction

Types of theory and levels of theoretical analysis. Empirical, logical, and conceptual considerations in the construction of theory. Problems and prospects for theoretical integration and the development of general theory. Prerequisites: Graduate standing in criminal justice, and CRJ 701 and CRJ 702, consent of instructor.

CRJ 715 **3 credits**
Criminal Justice Policy

Contemporary policies in criminal justice. Relationships among theory, policy, and practice. Attention to public opinion, legislative process, law enforcement administration, the courts, appellate review, issues of intergroup conflict, and civil rights. Prerequisite: Graduate standing in criminal justice or consent of instructor.

CRJ 716 **3 credits**
Graduate Readings in Criminal Justice

With faculty supervision, students pursue a personalized program of readings related to specific issues in criminal justice. Prerequisites: Graduate standing in criminal justice or consent of instructor, and CRJ 701 and CRJ 702.

CRJ 724 **3 credits**
Applied Research in Criminal Justice

Survey of research and statistical methods appropriate for evaluating criminal justice programs. Nature and role of program evaluation; impact and process assessment; presentation and interpretation of statistical results, ethics and politics of evaluation research. Prerequisites: CRJ 701, 702, 703.

CRJ 796 **3 credits**
Comprehensive Examination

As part of the requirements for the Professional Degree Program, students must pass a written comprehensive examination designed to test students' ability to synthesize a body of knowledge in criminal justice. Prerequisites: CRJ 700, CRJ 702, CRJ 703, CRJ 705.

CRJ 797 **3 credits**
Master's Thesis in Criminal Justice

Development of a research design and analysis of data relating to an issue of theoretical and empirical significance. Students expected to display the ability to integrate the elements of the core courses and related program of study. May be repeated to a maximum of six credits. S/F grading only. Prerequisites: Graduate standing in criminal justice, consent of instructor, and CRJ 701, 702, 703, 704, and 705.

CRJ 798 **3 credits**
Applied Project in Criminal Justice

Research application in criminal justice or an evaluation of a specific criminal justice program. May be repeated to a maximum of six credits. Prerequisites: CRJ 701-705, and 724.

CRJ 799 **3 credits**
Independent Study in Criminal Justice

Directed research on an issue of contemporary significance in criminal justice, culminating in the development of a research paper. May be repeated to a maximum of six credits. Prerequisites: Graduate standing in criminal justice or consent of instructor, and CRJ 701 and CRJ 702.

The following 600-level courses have been approved for graduate credit. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

- CRJ 605 History of Criminal Justice
- CRJ 611 Comparative Criminal Justice Systems
- CRJ 628 Women and Crime
- CRJ 636 Sociology of Law
- CRJ 641 Social Science in Law

Public Administration

Chair

Bernick, E. Lee (2000), Professor; B.A., M.A., Ph.D., University of Oklahoma.

Graduate Coordinator

Lukemeyer, Anna (1999), Assistant Professor; A.B., Indiana University; J.D., LL.M., Southern Methodist University School of Law; Ph.D., Syracuse University.

Graduate Faculty

Battaglio, Paul (2005), Assistant Professor; B.A., M.P.A., Louisiana State University; Ph.D., University of Georgia.

Reilly, Thom (1999), B.A., Memphis State University; M.S.W., Arizona State University; D.P.A., University of Southern California.

Schmidt, Robert (1999), B.A., M.A., Ph.D., University of Nevada, Las Vegas.

Springer, Christine (2001), B.A., University of Arizona; M.P.A., Arizona State University; Ph.D. Indiana University.

Stream, Christopher (2004), Assistant Professor, B.A., University of Nebraska; M.S., Ph.D., Florida State University.

Sutton, Richard (1974), Associate Professor, Ph.D. University of North Carolina, Chapel Hill.

Thompson, William N. (1980), Professor; B.A., M.A., Michigan State University; Ph.D., University of Missouri.

Professors Emeriti

Goodall, Leonard E. (1979-2000), Emeritus President and Professor; B.A., Central Missouri State University; M.A., University of Missouri; Ph.D., University of Illinois.

Lowry, Phillip E. (1983-1996), Emeritus Associate Professor; B.S., University of Maryland; M.S.B.A., George Washington University; D.B.A., Ph.D., Arizona State University.

Tilman, Lee R. (1967-1997), Emeritus Professor; B.S., Oregon State University; M.A., Ph.D., University of Arizona.

The Department of Public Administration within the Greenspun College of Urban Affairs offers a graduate-level certificate in public management and a Master of Public Administration (M.P.A.) degree designed to meet the special educational needs of professional public administrators, nonprofit employees, and health care administrators and an Executive Master in Crisis and Emergency Management. The Master of Public Administration degree is designed to provide the public administrator with an understanding of the governmental and economic environment in which he or she must work. In addition to serving administrators in governmental organizations, the program is appropriate for career military personnel, nonprofit organization administrators, and those in the private sector especially Health Care Administration professionals whose responsibilities involve extensive contact with governmental agencies and public sector personnel.

Courses within the program are scheduled during the evenings and weekends to meet the needs of employed students. Graduates of the program will have an understanding of governmental structure and organizations,

the essential principles of public management, and the theory and methods of research concerning public administration and the development of public policy. Graduate work in the program provides an awareness of the organizational contexts within which public sector administrators make and implement decisions, as well as training in the skills of administration and management. The M.P.A. is fully accredited by the National Association of Schools of Public Affairs and Administration (N.A.S.P.A.A.).

Graduate Certificate in Public Management

The Department of Public Administration offers a Graduate Certificate In Public Management. The certificate is designed for individuals with a baccalaureate degree and who are currently employed in a public (national, state, or local) or nonprofit agency. The certificate is designed to provide individuals the basic intellectual foundation necessary to function as a manager in the public sector.

Admission Requirements

Applicants must have earned an undergraduate degree. Moreover, they must be currently employed in a public agency at the national, state, or local level. As it currently is configured, admissions into the certificate program is only permitted if a student enters a cohort that is being sponsored by a government agency. Applicants must be accepted by the Graduate College and the Department of Public Administration.

Program Description

Students will be required to complete fifteen hours of graduate work and complete an environmental scan of an agency, normally the one where they are employed, which will serve as the capstone experience. Twelve of the fifteen credit hours will be comprised of courses currently required in the Master in Public Administration degree. Students will earn an additional three credits by enrolling in three one-credit courses designed to meet specific technical needs of public managers.

The Certificate program requires:

- PUA 701 Principles of Public Administration
- PUA 713 Seminar in Organization Theory
- PUA 714 Seminar in Fiscal Administration
- PUA 718 Seminar in Public Personnel Administration

Three credits from the following one credit courses:

- PUA 792 Current Issues in Public Administration: Grant Writing
- PUA 792 Current Issues in Public Administration: Strategic Planning
- PUA 792 Current Issues in Public Administration: Lobbying
- PUA 792 Current Issues in Public Administration: Information Presentation
- PUA 792 Current Issues in Public Administration: Ethics
- PUA 792 Current Issues in Public Administration: Performance Measures

Capstone Experience: Certificate program students are required to submit a final project paper that uses knowledge and skills obtained from the course work and applies this information to an organization of their choice. Specific guidelines for the paper may be obtained at the Department of Public Administration office.

Relationship to M.P.A. Degree

Students earning the certificate may apply for admission into the Master of Public Administration degree program. If accepted, the fifteen credits earned in the certificate program may be applied to the M.P.A. Please contact the department for further information on admissions to the M.P.A.

M.P.A. Degree

Admission Requirements

All applications for admission to the M.P.A. program are made to the Graduate College but are reviewed by the M.P.A. Admission's Committee. The committee considers all training and preparation, general abilities, and previous experience.

An application form, official transcripts of all college-level work, and official test reports must be submitted to the Graduate College. In addition, a set of transcripts must be sent to the department and the applicant should have:

1. An earned bachelor's degree in an acceptable field of undergraduate study.
2. A GPA of at least 2.75 overall or 3.00 in the last 60 semester hours of undergraduate study.
3. A satisfactory score on either the Graduate Record Examination (GRE)—combined score of at least 900 on the verbal and quantitative sections—or a comparable score on the Graduate Management Admissions Test (GMAT). Applicants with an undergraduate GPA of 3.5 and five years of responsible administrative or professional work experience in the public or nonprofit sector need not submit GRE or GMAT scores. Applicants who have completed the department's Graduate Certificate in Public Management with a GPA of 3.5 or higher also need not submit GRE or GMAT scores.
4. At least one year of responsible administrative or management experience in a public agency or permission of the coordinator of the M.P.A. program.
5. Three letters of reference.*
6. A resumé indicating educational and professional experience.*

*Letters of reference and resume should be sent directly to the department.

Degree Requirements

The M.P.A. degree requires 36 hours of approved course work. For students without appropriate professional administrative experiences, the degree requires an internship and a total of 39 hours. All students entering the program begin by taking PUA 701, Principles of Public Administration, a class designed to provide a general overview of the field. With this foundation, the student then embarks upon the rest of the program.

There are four main parts to the M.P.A. program: a core focusing on general administrative and management skills; a set of courses developing students' analytical skills; a concentration developed through electives; and completion of a final paper that applies analytic and strategic skills to a complex issue in public administration. In addition, a capstone course, PUA 795, is taken near the end of the student's program. The electives must be approved by the Director of the M.P.A. program in a concentration area. Possible areas of concentration include non-profit management and health care administration.

In selecting courses to distribute over these four areas, the student will meet with an academic advisor and write a formal degree plan, which must have the approval of the M.P.A. coordinator.

Students must obtain a B average in order to graduate. A student can have no more than one grade less than a B-. It is assumed that students working full time and taking courses on a part-time basis can complete the M.P.A. program in two and one-half years of study.

General Program Structure

Below is a list of those courses leading to the M.P.A. degree: Core (24 credits required)

PUA 701 Principles of Public Administration	3 credits
PUA 713 Seminar in Organization Theory	3 credits
PUA 714 Seminar in Fiscal Administration	3 credits
PUA 718 Seminar in Public Personnel	

Administration 3 credits

Analytic studies (9 credits)

PUA 722 Quantitative Methods for Public Administration	3 credits
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PUA 723 Research Design for Public Administration	3 credits
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Students select a third course from a list of courses approved by the Graduate coordinator (students should contact the department office to obtain the list).

Capstone Course:

PUA 795 Formulating Administrative Strategies in the Public Sector	3 credits
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Electives (9 credits required)

Applied Analytical Paper:

*PUA 791 Topics in Administration	3 credits
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**PUA 709 Internship Program in Public Administration	3 credits
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* required

** required of students without appropriate professional public administrative experience

M.P.A. with Non-Profit Management Concentration

PUA Core (24 credits required)

Electives: 9 hours of additional electives approved by the department including:

PUA 770 Environment of Non-Profit Management

Executive Crisis and Emergency Management

The ECEM program is a professional degree designed to maximize the expertise of experienced professionals from numerous disciplines, levels, and regions, thereby providing the opportunity to both advance individual philosophies and to gain broad exposure to a wide variety of other techniques and methodologies concerning emergency management. The degree offers enhanced professional growth for the individual and a contribution to a developing body of knowledge.

The program is intended for mid- to-upper level incident response managers and policy makers at the federal, state, and local level. Private sector candidates must have strong background in incident response, or be in a position that requires significant responsibility and governmental interface in this arena.

Course Structure

1. Students participate in three modules, each lasting six months.
 - a. Module 1, Emergency Management: This module provides a broad foundation of how emergency management is currently conducted in the United States, with respect to both natural and man-made disasters.
 - b. Module 2, Homeland Security, Combating Terrorism: This module focuses on terrorist incident management, exploring the entire spectrum of pre-incident, crisis management, and consequence management phases. It examines the various mechanisms in place designed to detect, prepare for, prevent, protect, respond to, and mitigate/recover from a terrorist incident - at the federal, state, county, and municipal levels - particularly those incidents involving the use of weapons of mass destruction.
 - c. Module 3, Electives: This module offers a broad array of elective courses for each student to pursue based on individual preference and organizational requirements.

Course Execution

1. The program will consist of six one-week resident sessions, conducted approximately every three months.
2. The final one-week session will be a field trip to Washington D.C.
3. A field-based practical exercise will be conducted.
4. The entire program is designed to last 18 Months, and will require 36 credits for degree completion.

Admission Requirements

1. A Baccalaureate degree from a regionally accredited college or University.
2. A minimum grade point average of 2.75 overall for all undergraduate work.
3. A completed Graduate College application with a resume. Note: The resume should indicate the applicant's professional experience.

4. Submission of official transcripts from all colleges and universities you have attended.
 5. Three letters of reference supporting the application.
- All the above should be sent to:

ECEM Program
Department of Public Administration
4505 Maryland Parkway, Box 456026
Las Vegas NV 89154-6026

Executive Master's in Emergency Management

ECEM 721 2-3 credits Emergency Management Leadership and Organizational Behavior

Provides introduction to leadership and organizational theory in the context of emergency management. Examines theory and develops a range of skills in a number of interpersonal areas: conflict management, use of power, group dynamics, and leadership and influence. Prerequisite: Admission into program.

ECEM 723 2-3 credits Human Ecology

Explores the human side of emergencies, by analyzing the public response to a terrorist incident, the public health implications of a major incident, the psychological component, and the long-range environmental considerations that must be taken when responding to an incident. Prerequisite: Admission into program.

ECEM 740 3 credits Response to Terrorist Incidents

Studies crisis management responses pertaining to terrorist activities. Covers principles, characteristics, objectives, phases, organizational requirements, command and control issues, planning and coordination, incident site management, crime scene management, and responsibilities and capabilities of federal and state/local agencies for terrorist incidents. Prerequisite: Admission to program.

ECEM 741 3 credits Regional Overview of Terrorism

Studies the threat of terrorism pertaining to various regions and specific countries of the world. Focuses on nature of terrorism in contemporary society from an international perspective and provides an examination of the history, objectives, and favored tactics of major terrorist organizations on a regional basis. Prerequisite: Admission into the program.

ECEM 742 3 credits Historical Overview of Terrorism

Focuses on the historical roots of terrorism and stresses importance of understanding the past to adequately prepare for the future. Through a historical perspective, provides basis for and discusses aspects that make contemporary terrorism of today different from traditional terrorism of the past. Prerequisite: Admission into program.

Public Administration

PUA 701 **3 credits**

Principles of Public Administration

(Same as SWK 763.) Survey of the field of public administration with an introduction to the functions of finance, personnel administration, evaluation, research and planning. Prerequisite: Enrollment in the M.S.W. or M.P.A. program or consent of instructor.

PUA 706 **3 credits**

Administration in a Federal and Intergovernmental Perspective

Provides students with understanding of the issues and problems of administering public programs in a federal system. Emphasis placed on how all levels of governments work together. Studies role of grants, mandates, and state/federal statutes on administrators.

PUA 709 **1-6 credits**

Internship Program in Public Administration

Graduate students have a work assignment in a public agency at the national, state, or local governmental level and make regular reports on work activities and assigned readings.

PUA 710 **3 credits**

Accounting for Public Service Managers

Introduces financial accounting statements from the perspective of the user. Covers principles and concepts of cost accounting from a managerial perspective. Covers financial accounting for investor owned, government, and not-for-profit organization. Prerequisite: Facility with spreadsheet software is strongly recommended.

PUA 711 **3 credits**

Seminar in Administrative Behavior

Stresses the development of knowledge and skill in understanding the role of the administrator in the context of public agencies. Emphasis given to strategies of policy making, policy implementation and understanding the factors that bear upon the administrator acting in these capacities.

PUA 713 **3 credits**

Seminar In Organization Theory

Analyzes organizations as functioning social units. Emphasis on organization design, structure, processes, and external relationships.

PUA 714 **3 credits**

Seminar in Fiscal Administration

(Same as SWK 765.) Provides an overview of fiscal administration in the public sector at all levels of government. Introduces students to basic concepts and practices in two key areas: government revenues and budgeting. Prerequisite: PUA 701 or consent of instructor.

PUA 715 **3 credits**

Administrative Law

Branch of law that deals with public administration.

Examines authority upon which administrative agencies operate and limits necessary to control agency action. Attention given to procedures governing rule making, administrative adjudication, and judicial review. Prerequisite: PUA 701 or consent of instructor.

PUA 718 **3 credits**

Seminar in Public Personnel Administration

(Same as SWK 767.) Includes advanced reading, discussion and research in personnel problems as seen in the public and nonprofit sector. Prerequisite: PUA 701 or consent of instructor.

PUA 719 **3 credits**

Personnel Assessment and Selection

Covers legal and technical aspects of personnel selection. Concentrates on assessment center process for diagnosing management skills and selection in the public sector. Prerequisite: PUA 701 or consent of instructor.

PUA 720 **3 credits**

Information Technology and the Public Sector Manager

Introduces computer-based information systems from the perspective of the public sector manager. Presents the theoretical aspects of organizational computing. Covers such management issues as computer security concerns, health-safety issues, privacy and confidentiality requirements, ADA requirements, training issues, and decision-making applications.

PUA 721 **3 credits**

E-Government Implications for Public Sector Organizations

Introduces e-government from the perspective of the public sector organization. Presents theoretical aspects of Internet based systems. Covers such management issues as security, ADA requirements privacy statements, and the provision of services on the web. Discusses organizational implications of providing services on line and the use of change management. Prerequisite: PUA 720.

PUA 722 **3 credits**

Quantitative Methods for Public Administration

Quantitative techniques used in program design and evaluation. Coverage includes such topics as measurement, tests of significance, and measures of association. Includes descriptive and inferential statistics and forecasting methods. Prerequisite: PUA 701 or consent of instructor.

PUA 723 **3 credits**

Research Design for Public Administration

Introduction to empirical research methods useful for analysis of public policies and programs. Includes techniques such as survey research, experiments, quasi-experiments, case studies, and qualitative methods. Students learn to understand, evaluate, and undertake basic empirical research of topics relevant to public administration and public policy. Prerequisites: PUA 701 or consent of instructor.

PUA 725 **3 credits**

Policy Analysis and Program Evaluation

Introduces students to the practical aspects of program evaluation, and the methodologies employed to analyze a program and to conduct an evaluation in the public and nonprofit sectors. Prerequisites: PUA 722 and PUA 723.

PUA 726 **3 credits**

Policy Analysis

Introduction to skills and knowledge of concepts, techniques and theories of public policy analysis. Prerequisite: PUA 701.

PUA 728 **3 credits**

Career Development and Performance Appraisal in the Public Sector

Investigates how and why government agencies should develop career-stage appropriate employee development programs. Students gain greater appreciation of public sector employee evaluation systems. Prerequisites: PUA 718 or consent of instructor.

PUA 732 **3 credits**

Political Economy

Survey of the field of political economy since 1945 with emphasis on alternative theories of the role of government, value, and distribution. Focus on the ideological structure of neomarxism, neoinstitutionalism, social economics and postkeynesianism as well as the neoclassical synthesis, monetarism and public choice. Prerequisite: Graduate standing in the M.P.A. or Economics programs or consent of instructor.

PUA 735 **3 credits**

Public Regulation of Gambling

Development and control of the legalized gambling industry in its many forms. Comparative analysis of regulatory models for casino, lottery, pari-mutuel, and charity gambling in Nevada and other jurisdictions. Emphasis given to procedures for insuring financial and legal integrity of gambling. Prerequisite: PUA 701 or consent of instructor.

PUA 736 **3 credits**

Impacts of the Gaming Industry

Comprehensive course dealing with the political, social, and economic impacts of the world-wide gambling industry. Special attention given to economic development impacts in the public sector with the establishment of various kinds of gambling. Prerequisite: PUA 701 or consent of instructor.

PUA 740 **3 credits**

Urban Administration

Urban management approached from the viewpoint of the chief administrator. Some consideration given to the city as an organic economic, political and social institution. Emphasis on administrative exercise of leadership decision making and various functional activities. Prerequisite: PUA 701 or consent of instructor.

PUA 742 **3 credits**

State Government Administration

Focuses on the administration of state government functions in general, with emphasis on the state government of Nevada. Covers the economic and political environment of the state and the role of state government in the federal system. Prerequisite: PUA 701 or consent of instructor.

PUA 770 **3 credits**

The Environment of Nonprofit Management

Historical and philosophical foundations necessary to understand management issues in nonprofit agencies in the United States. Students gain perspective on leadership and governance of nonprofit agencies.

PUA 791 **3-6 credits**

Topics in Administration

Emphasizes the intensive specialized study of a selected administrative topic. Involves advanced study, reading, and analysis culminating in a written report and designed to supplement the learning provided by the tool and theory courses. Prerequisites: Completion of the appropriate tool and theory courses and consent of instructor.

PUA 792 **1-6 credits**

Current Issues in Public Administration

Examination of timely issues in the field with special attention to the needs of the practitioner. May be repeated to a maximum of nine credits.

PUA 795 **3 credits**

Formulating Administrative Strategies in the Public Sector

Integrating course in public administration taken in the last semester of study for the M.P.A. degree. Covers the analysis of alternative administrative strategies. Emphasis placed on the modern role and techniques of administration. Case studies and administrative problems considered. Focus on the use of contemporary techniques in finding solutions to practical administrative problems. Prerequisite: Open only to M.P.A. students in the last semester of study for the M.P.A. degree or by consent of advisor.

PUA 798 **1-6 credits**

Research in Public Administration

Individual research projects under the direction of a faculty member. May be repeated to a maximum of six credits. Prerequisites: PUA 701, 722, and 723 and/or consent of instructor.

Graduate credit may be obtained for courses designated 600 or above. Full descriptions of these courses may be found in the UNLV *Undergraduate Catalog* under the corresponding 400 number. Credit at the 600-level normally requires additional work.

HCA 652 Health Politics and Policy

HCA 680 Organization and Management of Long-term Care Services

School of Social Work

Director

Joanne Thompson (2003), Professor; B.A., LaGrange College, M.S.W., University of Arkansas, Ph.D., Rutgers University.

Assistant Director/Graduate Coordinator/Field Director

Hardy-Desmond, Stacey (1998), Associate Professor in Residence; B.A., University of California, Riverside; M.S.W., University of California, Los Angeles; Ph.D., California School of Professional Psychology

Graduate Faculty

- Albert, Vicky (1998), Associate Professor; B.S.W., M.S.W., University of Illinois; Ph.D., University of California, Berkeley.
- Bergquist, Kathleen Leilani Ja Sook (2004), Assistant Professor; B.A., Christopher Newport University, M.S.W., Norfolk State University, Ph.D., College of William and Mary.
- Denby, Ramona (1998), Associate Professor; B.S.W., Arizona State University; M.S.W., University of Nevada, Las Vegas; Ph.D., Ohio State University.
- Epstein, William M. (1992), Professor; B.A., Brooklyn College; M.S.W., University of Pittsburgh; D.S.W., Columbia University.
- Jackson, Helene, (2004), Assistant Professor: B.A., Simmons College, M.S.W., Boston University, Ph.D., Smith College.
- Langston, Esther (1970), Professor; B.A., Wiley College; M.S.W., San Diego State University; Ph.D., University of Texas.
- Oakes, Margaret (1997), Associate Professor; B.A., University of Arizona; M.S.W., California State University, Fresno; Ph.D., University of Texas at Austin.
- Overcamp-Martini, Maryann (2002), Assistant Professor; B.A., College of Mount St. Joseph-on-the-Ohio; M.P.A., University of Wyoming; M.S.W., Ph.D., University of Utah.
- Owens-Kane, Sandra (1998), Assistant Professor; B.A., M.S.W., University of Nevada, Las Vegas; Ph.D., University of California, Berkeley.
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- Sharma, Satish (1982), Professor; B.A., M.A., Panjab University; M.S.W., University of Iowa; Ph.D., Ohio State University.
- Sun, An-Pyng (1997), Associate Professor; B.A., National Chung-Shing University; M.S.W., University of Illinois, Champaign-Urbana; Ph.D., Case Western Reserve University.

Professor Emeriti

Rubin, Gerald K. (1976-1998), Emeritus Associate Professor; B.A., University of Minnesota; M.S.W., Ph.D., University of Denver.

The Master of Social Work (M.S.W.) program at UNLV prepares students for professional social work careers in the areas of direct practice with individuals, families and groups, administrative practice and planning, and child welfare. The mission of the M.S.W. program is to educate students to work with populations in urban settings, utilizing generalist, problem solving, empowerment, and social justice approaches. Special attention is given to the mastery of multiple practice issues, attendant upon the present plural and diverse populations in today's American society.

Students may elect either "direct practice," "administrative practice and planning," or "child welfare" as their area of concentration. The direct practice concentration prepares students for advanced social work practice with individuals, families, and groups. The administrative practice and planning concentration prepares students for advanced administrative, managerial, and planning practice in human service organizations and agencies at the local, state and national levels. The child welfare concentration prepares students for practice in public and private child welfare settings integrating micro and macro practice models.

The school's philosophy stresses the importance of both sound academic education and rich practical experience in preparing "advanced social work practitioners." Faculty members bring to their positions a range of knowledge and applied experiences, and they are active in scholarly research, consultation, and practice in their respective fields. Students are provided academic knowledge related to the theory, research, and major substantive issues in the field and practice experience through practicum experiences in a variety of private and public agency environments. Field practicum placement is concurrent with classroom instruction and is an integral part of the program. A wide variety of field practicum agencies are available, and students are placed in the field under the guidance of the Field Director and in cooperation with the professional supervisory staff from local social service agencies. The program seeks to encourage and accommodate varied student interests, abilities, and career goals. Partnerships and on-going collaborative relationships between the school faculty and the service agencies facilitate a rich blend of academic and community-based experience for our students.

The designed M.S.W. program is consistent with the accreditation standards of the field's national professional accrediting body, the Council on Social Work Education (CSWE). The program is fully accredited by the Council on Social Work Education. The School of Social Work does not discriminate on the basis of race, color, gender, age, creed, ethnic background, national origin and political, religious, or sexual orientation.

Admission Requirements

An applicant must have the following:

1. *For the Regular M.S.W. program:* A minimum overall grade point average of 2.75 on a 4.00 scale for the bachelor's degree, or a grade point average of 3.00 in the last 60 credits of undergraduate study leading to the bachelor's degree. An earned bachelor's degree in social work from an accredited program or a degree in another field.
2. *For the Advanced Standing M.S.W. program:* A minimum G.P.A. of 3.25 in the last 60 credits leading to the bachelor's degree in social work from an accredited social work program.
3. Completion of the following liberal arts courses: English composition or literature courses; college-level mathematics or statistics course; courses in social sciences, preferably in psychology, sociology, and anthropology; a science course; one course in fine arts

or humanities; a course in history or political science; a course or content in the biological determinants of human behavior or human biology; a course or content in diverse cultures, social conditions, or social problems. The applicant must not have more than two course deficiencies to be admitted to the program, and those must be cleared by the end of the first semester of M.S.W. studies.

4. An applicant must submit an application for admission, transcripts of all college-level work, and the application fee to the Graduate College. Three letters of recommendation (as specified below), a personal statement, and transcripts of all college-level work must be submitted to the School of Social Work.
5. The applicant must submit to the School of Social Work three letters of recommendation (on the prescribed form) that reflect the applicant's academic experience, general abilities, and interest and motivation in pursuing a graduate degree in social work. One of these letters should be from the most recent employer in a social work position (if applicable), and one should be from an instructor (social work instructor, if applicable) from the last college attended. The third letter should be from a person who is familiar with the applicant's overall qualifications, experience, and interest in pursuing the M.S.W. degree.

Admission to the MSW Program cannot be deferred. The student must also enroll in the program to which admission is offered (i.e., a particular concentration, full- or part-time, regular or advanced standing.). Students must make any request for a change in status in writing and in accordance with School procedure. Also considering the rigor of the program, students must evaluate if their individual circumstances and resources warrant applying for the full-time or part-time program. Students working 20 hours a week or more are strongly advised to apply to the part-time program.

Degree Requirements

I. Regular M.S.W. Program (60 credits)

Foundation courses required for all regular M.S.W. program students:

SWK 701	Social Work Policy I
SWK 703	Social Work Policy II
SWK 715	Human Behavior & the Social Environment I
SWK 716	Social Work Research I
SWK 719	Foundation Practicum I
SWK 720	Foundation Practice Methods I
SWK 726	Social Work Research II
SWK 729	Foundation Practicum II
SWK 730	Foundation Practice Methods II
SWK 735	Human Behavior & the Social Environment II

- a. For students pursuing the Direct Practice concentration, the following courses are required in addition to the foundation courses listed above:
SWK 707 Developing Cross Cultural Competence

SWK 739	Field Practicum I (Direct Practice)
SWK 740	Practice Methods I (Direct Practice)
SWK 747	DSM: Assessment & Diagnosis
SWK 749	Field Practicum II (Direct Practice)
SWK 750	Practice Methods II (Direct Practice)

In addition, students must complete 12 graduate elective credits.

- b. For students pursuing the Administrative Practice and Planning concentration, the following courses are required in addition to the foundation courses listed above:

SWK 707	Developing Cross-Cultural Competence
SWK 759	Field Practicum I (Administrative Practice & Planning)
SWK 760	Practice Methods I (Administrative Practice & Planning)
SWK 765	Seminar in Fiscal Administration
SWK 769	Field Practicum II (Administrative Practice & Planning)
SWK 770	Practice Methods II (Administrative Practice & Planning)

In addition, students must complete 12 graduate elective credits.

- c. For students pursuing the Child Welfare concentration, the following courses are required in addition to the foundation courses listed above:

SWK 779	Field Practicum I (child welfare)
SWK 786	Child Welfare Program Evaluation
SWK 789	Field Practicum II (child welfare)
SWK 790	Family-Based Practice
SWK 793	Child Welfare Policy & Service
SWK 797	Culturally Competent Child Welfare Practice
SWK 798	Child Welfare Administration & Supervision

In addition, students must complete 9 graduate elective credits.

II. Advanced Standing Program

The requirements of the Advanced Standing program (42 credits) are as follows:

Summer Bridge courses required for all advanced standing M.S.W. students.

SWK 709	Social Policy Seminar
SWK 745	Human Behavior & the Social Environment Seminar
SWK 746	Social Work Research Seminar
SWK 780	Practice Seminar

- a. Advanced standing students pursuing the Direct Practice concentration, follow the same course of study as listed above under section I.a. (DP concentration courses).
- b. Advanced standing students pursuing the Administrative Practice and Planning concentration, follow the same course of study as list above under section I.b. (APP concentration courses).

- c. Advanced standing students pursuing the Child Welfare concentration, follow the same course of study as listed above under section I.c. (CW concentration courses).

The other degree requirements include the completion of course work with a minimum overall grade point average of 3.00 on a 4.00 scale and a passing score on the comprehensive examination. Those choosing the thesis option will enroll in SWK 796 for 2 semesters (instead of two elective courses) and will orally defend the thesis before a chosen committee.

Advanced Graduate Forensic Social Work Certificate Program

The Forensic Social Work Certificate Program (FSWCP) is designed to meet the rapidly growing need throughout Nevada and the southwest for graduate level trained social workers with specific expertise related to law and legal systems. The FSWCP offers a comprehensive, formal specialization in forensic social work. The program addresses areas of practice that reflect the nexus between social work and the law, including: child welfare: domestic relations law including family violence; immigration; adult criminal and juvenile justice; public education; mental health and disabilities; and aging.

The program is guided by the values and knowledge-base of the social work profession, governed by the School of Social Work mission statement, and directed by the School's delineated goals and objectives. Didactic and experiential components of the FSWCP emphasize human diversity and social justice, with particular attention to the needs of at-risk, historically oppressed and vulnerable populations. The FSWCP prepares students for forensic social work practice with individuals, families, groups, organizations, and communities, especially those encountered within complex and dynamic urban environments.

Advanced Graduate Forensic Social Work Certificate Program Admission Requirements

Additional admissions requirements to the certificate program are delineated as follows:

1. Completion and verification of Master of Social Work degree
2. (Must submit official transcripts from granting program/institution.)
3. Professional Social Work License (L.S.W., L.C.S.W. or L.I.S.W. in Nevada or the equivalent granted by another State's Board of Examiners for Social Workers)
4. Completion of the Advanced Graduate Forensic Social Work Certificate Program application form
5. Personal statement. (Three pages maximum.)
6. Three Reference Forms (Preferably professors or work supervisors who have standing to comment on the candidate's potential success as a forensic social worker.)
7. Candidate Interview

Certificate Requirements

Granting of a certificate in forensic social work will be made upon successful completion of the following program of study on either a full-time (one semester) or part-time (two consecutive semesters) basis. All courses for the forensic social work certificate must be completed in no more than three consecutive semesters.

Courses	Credits
SWK 7001 Orientation to Forensic Social Work	1
SWK 676 Legal and Ethical Issues in Social Work	3
SWK 7002 Seminar in Criminal Law	3
SWK 7003 Seminar in Family Law	3
SWK 7004 Skills Lab: documentation, expert witness, mock court	3
SWK 7005A Field Practicum – Forensic Social Work*	3
SWK 7005B Professional Presentation – Forensic Social Work*	3
SWK 7010 Capstone in Forensic Social Work	2
Total for Certification Completion	18

* SWK 7005A and B – students who demonstrate extensive work experience may opt for option “B” in lieu of a field practicum. SWK7005B can only be taken with administrative approval, otherwise all students must participate in the experiential learning experience provided by Field Practicum.

Social Work

SWK 701 Social Welfare Policy I 3 credits

Introduction to the history and philosophy of social welfare and social work in the United States. Social welfare decision making, policies, and services. Theory of social need and social interventions. Prerequisite: Graduate standing in social work.

SWK 703 Social Welfare Policy II 3 credits

Examines social welfare policy and provides analytical frameworks and guidelines for determining the efficacy of public policy in addressing human needs. Focuses on the issues of poverty, social services and generalist social work practice. Prerequisite: SWK 701.

SWK 705 Social Work Practice with Therapeutic Groups 3 credits

Historical development of group work, practice methodology in interactional groups, and theoretical underpinnings for social work practice. Focuses on development of skills to lead therapeutic groups with a variety of diverse urban population. Prerequisites: SWK 720 and SWK 730 or SWK 780.

SWK 707 **3 credits**
Developing Cross Cultural Competence

Sensitizes students to the strengths, problems and issues in working with groups of color. Provides an understanding of the cultural and behavioral patterns of ethnic communities with a framework for utilizing this knowledge in social work practice. Prerequisite: Graduate standing in social work.

SWK 709 **3 credits**
Social Work Policy Seminar

Critical analysis of social policy necessary for advanced social work practice. Prerequisite: Advanced standing in social work.

SWK 710 **3 credits**
Child Welfare Practice

Develops advanced knowledge and skills for use in intervening in current or potential problems of abuse, neglect, dependency, unruliness, and delinquency of children and youth. Types of services, both traditional and new, social workers provide to children. Prerequisites: SWK 793 or concurrent enrollment in SWK 793.

SWK 715 **3 credits**
Human Behavior and the Social Environment I

Provides advanced knowledge-building theories and knowledge of normal and abnormal human bio-psycho-social development and functioning of individuals, families and micro-groups. Focuses on the impact of social, economic, and cultural systems on individual, family and group well-being. Provides foundational understanding of the use of DSM-IV. Graduate standing in social work.

SWK 716 **3 credits**
Social Work Research I

Provides an understanding of the scientific-analytic approach to the building of the knowledge base for social work practice at different levels. Provides familiarity with quantitative and qualitative research methodologies, various research designs, sampling procedures, data collection procedures, data analysis techniques, and report writing. Emphasizes diversity, empowerment, and social justice considerations as well as ethical standards of conducting research. Prerequisite: Graduate standing in social work.

SWK 719 **3 credits**
Foundation Practice I

Foundation field practicum course requires 150 hours of generalist social work practice experience in a social service agency and attendance in weekly field seminar classes. Provides broad range of experiences, from micro to macro levels of intervention. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 720. Prerequisites: Graduate standing in social work.

SWK 720 **3 credits**
Foundation Practice Methods I

First course in the foundation practice sequence introduces students to a generalist practice approach with individual, families, and groups. Emphasizes values, ethics, knowledge, and skills essential for working with clients. Prepares students with generic practice skills in assessment, interviewing, intervention, evaluation, and termination. Corequisite: Enrollment in SWK 719. Prerequisite: Graduate standing in social work.

SWK 726 **3 credits**
Social Work Research II

Provides knowledge and practice of program evaluation, single-subject design, descriptive statistics, inferential statistics, data management and data analysis using SPSS. Prerequisites: SWK 716.

SWK 729 **3 credits**
Foundation Practicum II

Foundation field practicum course requires 150 hours of generalist social work practice experience in a social service agency and attendance in weekly field seminar classes. Provides broad range of experiences, from micro to macro levels of intervention. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 730. Prerequisite: SWK 719.

SWK 730 **3 credits**
Foundation Practice Methods II

Second course in the foundation practice sequence continues to prepare students with a generalist foundation and focuses on practice with organizations and communities. Emphasizes a strength perspective and provides generalist level content in administration, community development, public and agency policy making and grant writing. Corequisite: Enrollment in SWK 729. Prerequisite: SWK 720.

SWK 735 **3 credits**
Human Behavior and the Social Environment II

Examines advanced knowledge-building theories and knowledge of human behavior at the level of organization, community, macro-level groups, and culture. Provides an understanding of macro systems, social and organizational change and collective action. Prerequisite: SWK 715.

SWK 739 **3 credits**
Field Practicum I (DP)

Field practicum requires 300 hours in a social service agency and attendance in weekly field seminar classes. Builds upon generalist foundation. Prepares for advanced, critically analyzed, and ultimately autonomous direct social work practice. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 740. Prerequisite: SWK 729 or Advanced Standing.

SWK 740 **3 credits**
Direct Practice I

First course in advanced direct social work practice. Integrates skills of assessment, interviewing, intervention, and termination into social work treatment models and theories. Builds upon generalist foundation. Highlights empowerment, client advocacy, and strengths perspective. Emphasizes social work with individuals from culturally diverse and oppressed populations. Corequisite: Enrollment in SWK 739. Prerequisite: SWK 730 or advanced standing.

SWK 745 **3 credits**
Seminar: Human Behavior and the Social Environment

Provides advanced standing students with the theories and knowledge of human behavior necessary for advanced social work practice. Individual, family, group, organization, and community systems studied within a framework which emphasizes the diversity of human experience, strengths and empowerment perspectives, and efforts to promote social change and social justice. Prerequisite: Advanced standing in social work.

SWK 746 **3 credits**
Social Work Research Seminar

Overview of the scientific method and research methodology including descriptive and inferential statistics and application of qualitative and quantitative analysis to empirical research problems at the micro and macro levels, with special reference to diverse and oppressed populations. Prerequisite: Advanced standing in social work.

SWK 747 **3 credits**
DSM: Assessment and Diagnosis

Exploration and a synopsis of the criteria for diagnoses in the DSM for social work practice. Focuses on the use of DSM in assessment interventions and with diverse urban populations. Prerequisites: SWK 720 and SWK 730, or SWK 780.

SWK 749 **3 credits**
Field Practicum II (DP)

Field practicum course requires 300 hours of experience in a social service agency and attendance in weekly field seminar classes. Builds upon generalist foundation. Prepares for advanced, critically analyzed, and ultimately autonomous direct social work practice. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 750. Prerequisite: SWK 739.

SWK 750 **3 credits**
Direct Practice II

Second course in advanced direct social work practice. Intergrades systems of family-centered practice. Builds upon generalist and advanced curricula. Explores context of social work with families and groups via historical, conceptual, and contemporary modes of practice. Emphasizes working with culturally diverse and oppressed populations. Corequisite: Enrollment in SWK 749. Prerequisites: SWK 740.

SWK 759 **3 credits**
Field Practicum I (APP)

Field practicum course requires 300 hours of experience in a social service agency and attendance in weekly field seminar classes. Builds upon generalist foundation. Prepares for advanced, critically analyzed, and ultimately autonomous practice in administration, policy, and planning. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 760. Prerequisite: SWK 729 or advanced standing.

SWK 760 **3 credits**
Administration, Policy, and Planning Practice I

Advanced applications of the planning processes as they relate to community and organizational issues. Examines the change process, evaluation of agency and communities, community practice models, decision making, management theories intervention strategy and proposal development. Corequisite: Enrollment in SWK 759. Prerequisite: SWK 729 or advanced standing.

SWK 763 **3 credits**
Principles of Public Administration

(*Same as PUA 701.*) Survey of the field of public administration with introduction to the function of finance, personnel, administration, evaluation, research and planning. Prerequisites: Enrollment in the M.S.W. or M.P.A. program or consent of instructor.

SWK 765 **3 credits**
Seminar in Fiscal Administration

(*Same as PUA 714.*) Provides an overview of fiscal administration in the public sector at all levels of government. Introduces students to basic concepts and practices in two key areas: government revenues and budgeting. Prerequisites: PUA 701 or consent of instructor.

SWK 767 **3 credits**
Seminar in Public Personnel Administration

(*Same as PUA 718.*) Includes advanced reading, discussion and research in personnel problems as seen in the public and nonprofit sector. Prerequisites: PUA 701 or consent of instructor.

SWK 768 **3 credits**
Supervision in Social Work

Delineates and explores principles, concepts, and components of supervision in social work. Examines the transition from worker to supervisor, differentiates supervision and consultation. Prerequisite: Graduate standing in social work.

SWK 769 **3 credits**
Field Practicum II (APP)

Field practicum course requires 300 hours of experience in a social service agency and attendance in weekly field seminar classes. Builds upon generalist foundation. Prepares for advanced, critically analyzed, and ultimately autonomous practice in administration, policy and planning. Ongoing professional field supervision/consultation also required. Corequisite: Enrollment in SWK 770. Prerequisite: SWK 759.

SWK 770 **Administration, Policy, and Planning Practice II** **3 credits**

Examines the specific techniques and processes of administration in relation to a conceptual framework for the management of human service organizations in public, voluntary social welfare agencies, and community organizations. Corequisite: Enrollment in SWK 769. Prerequisite: SWK 760.

SWK 779 **Field Practicum (APP) III** **3 credits**

Supervised social work practice experience consisting of 300 hours in a child welfare agency and attendance in weekly field seminar classes. Provides for the integration and application of social work values, knowledge, and micro to macro levels of advanced practice skills. Corequisite: Enrollment in SWK 780. Prerequisite: SWK 769.

SWK 780 **Social Work Practice Seminar** **3 credits**

Generalist social work practice, including values, knowledge, and skills essential for working with client systems of individuals, families, groups, organizations, and communities. Focuses on person-in-environment; a strengths perspective; diversity issues; skills in assessment and intervention of individuals, families, and groups; organizational and community developments, and social change. Prerequisites: Advanced standing in social work.

SWK 786 **Child Welfare Program Evaluation** **3 credits**

In-depth analysis of the planning and evaluation process in child welfare. Analyzes challenges confronting child welfare organizations in the United States. Prerequisites: SWK 716, SWK 726.

SWK 789 **Field Practicum II (Child Welfare)** **3 credits**

Supervised social work practice experience consisting of 300 hours in a child welfare agency and attendance in weekly field seminar classes. Provides for an appropriate progression in the integration and application of social work values, knowledge, and micro to macro levels of advanced practice skills. Prerequisite: Child Welfare Concentration.

SWK 790 **Family-Based Practice** **3 credits**

Provides students with an understanding of and advanced competencies in family-based services. Integration of theory, practice, programming and research within family-based services. Students apply therapeutic problem solving models to complex family patterns. Prerequisites: SWK 710, SWK 793, or consent of instructor.

SWK 791 **Advanced Practice With Children** **3 credits**

Examination of child and adolescent treatment issues and corresponding interventions. Child behavior disorders; issues of abandonment, grief and loss; and general children's mental health issues. Prerequisite: Graduate standing in social work.

SWK 792 **Cross-Cutting Issues in Child Welfare** **3 credits**

Special topics in the child welfare system, focusing primarily on the issues of mental health, substance abuse, and domestic violence faced by clients in the child welfare system. Prerequisite: Graduate standing in social work.

SWK 793 **Child Welfare Policy and Services** **3 credits**

Analyzes contemporary United States public child welfare policy, programs, and services, emerging policy and program directions in the field of child welfare, and their historical and philosophical roots, with particular emphasis on the preservation and reunification of families, preventive and supportive services, permanency planning, foster care, and adoption. Prerequisites: SWK 701 and SWK 703.

SWK 796 **Thesis** **3 credits**

Development, completion, and oral defense of research project before a chosen committee, aimed at evaluation of practice outcomes at different levels and advancement of scientific knowledge for social work practice. Prerequisites: SWK 716, SWK 726.

SWK 797 **Culturally Competent Child Welfare Practice** **3 credits**

Cultural competence in child welfare practice. Examination social, psychological, economic, political, and other structural aspects of racism, ethnicity, and multiculturalism as a dynamic of the public child welfare services system in the United States. Prerequisite: Graduate standing in social work.

SWK 798 **Child Welfare Administration and Supervision** **3 credits**

Introduces students to contemporary theories on administration and supervision in organizations which provide services to children and families. Focuses on public and nonprofit child welfare administration and supervision. Prerequisite: SWK 793.

SWK 799 **Independent Study** **1-3 credits**

Intensive study in a specific area of student interest under the direction of a faculty member. May be repeated to a maximum of six credits. Prerequisite: Consent of instructor.

SWK 7001 **1 credit**

Introduction to Forensic Social Work

Required for Forensic Social Work Certification. Course provides an overview of forensic social work principles and practice. Students are oriented to the roles and functions of social workers in host legal settings, and introduced to the organizational and professional cultural factors inherent to interdisciplinary collaborations.

SWK 7002 **3 credits**

Seminar in Criminal Law

Required for Forensic Social Work Certification. Addresses the social worker's involvement in criminal law as part of a legal team. Topics cover criminal litigation from the time an individual is charged through to adjudication and sentencing. Prerequisite: Admission to the Forensic Social Work Certification Program.

SWK 7003 **3 credits**

Seminar in Family Law

Surveys a spectrum of issues involving marriage, cohabitation and the family. Topics include the law and ethics of alternative dispute resolution (e.g. family, custody and divorce mediation), litigation in family matters, adoption, custody, guardianship, same-sex cohabitants, and parent-child issues with a solution focus. Prerequisite: Admission to the Forensic Social Work Certification Program.

SWK 7004 **3 credits**

Skills Lab in Forensic Social Work

Students will demonstrate forensic social work practice skills under critical analysis and review. Areas of focus include documentation and report writing for the legal arena, expert witness testimony, interviewing and assessment, mock court and advocacy. Prerequisite: Admission to the Forensic Social Work Certification Program.

SWK 7005A **3 credits**

Field Practicum - Forensic Social Work

Required for Forensic Social Work Certification. Alternative to SWK 7005B. Experiential learning at a community-based agency within the legal arena. Students will apply forensic social work theory and concepts to supervised practice. Course requires completion of practicum hours and field seminar attendance. Prerequisites: Admission to the Forensic Social Work Certification Program; SWK 7001.

SWK 7005B **3 credits**

Professional Presentation - Forensic Social Work

Alternative to SWK 7005A. Students will participate in directed research and present in a topical area of forensic social work theory or practice at a conference or symposium. Prerequisites: Admission to the Forensic Social Work Certification Program; instructor permission required.

SWK 7010 **2 credits**

Capstone to Forensic Social Work

Continuation of SWK 7001; students are required to demonstrate integration and synthesis of certification program content. Requirements include the production of (1) a publication quality paper co-authored with social work or law faculty, and (2) a professional portfolio documenting program achievements. Prerequisites: Admission to the Forensic Social Work Certification Program, SWK 7001.

The following 600-level courses have been approved for graduate credit. Full descriptions of these courses may be found in the *Undergraduate Catalog* under the corresponding 400 number.

- SWK 605 Group Practice
- SWK 622 AIDS: An Interdisciplinary Perspective
- SWK 641 Social Work with the Elderly
- SWK 661 Seminar: Contemporary Issues in Social Welfare
- SWK 662 Issues in Child Welfare
- SWK 670 Community Organization Practice
- SWK 672 Principles of Family Counseling
- SWK 674 Grant Writing and Management
- SWK 675 Treatment of Addictions
- SWK 676 Legal and Ethical Issues in Social Work
- SWK 693 Gandhian Welfare Philosophy and Nonviolent Culture
- SWK 694 Eastern Conceptions and Social Work Practice

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