# *NEVADA CAREER & TECHNICAL EDUCATION COURSE CATALOG SCHOOL YEAR 2015-2016*

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## VISION

*All Nevadans ready for success in the 21st century*

## MISSION

*To improve student achievement and educator effectiveness by ensuring opportunities, facilitating learning, and promoting excellence*

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# INTRODUCTION

## PURPOSE

The purpose of the statewide course catalog for career and technical education (CTE) is to provide a resource that consolidates all CTE secondary education courses in Nevada. This catalog shall be used as the sole resource for school districts to determine courses and course sequences for all high schools. This catalog is considered a dynamic resource where new courses may be added through the application process approved by the Department of Education to ensure the following thresholds are met:

- The CTE course and course sequence teaches the knowledge and skills required by industry through applied learning methodology and, where appropriate, work-based learning experiences that prepare students for careers in high-wage, high-skill and/or high-demand fields. Regional and state economic development priorities shall play an important role in determining program approval. Some courses also provide instruction focused on personal development.
- The CTE course and course sequence includes leadership and employability skills as an integral part of the curriculum.
- The CTE course and course sequence are part of a rigorous program of study and include sufficient technical challenge to meet state and/or industry-standards.

## CATALOG ORGANIZATION

Courses are organized into the following program areas: (1) Agriculture and Natural Resources; (2) Business and Marketing Education; (3) Health Sciences and Public Safety; (4) Hospitality, Human Services and Education; (5) Information and Media Technologies; and (6) Skilled and Technical Sciences. Courses within each program area are further aligned to their appropriate career cluster. Each program area section includes the following elements: (1) Program Course Sequences; and (2) Program Course Listings.

## PROGRAM COURSE SEQUENCES

The course sequencing provided in this section serves as a guide to schools to develop programs of study. Completion of the program core sequence is essential for the successful delivery of the state standards in each program.

The sequencing tables are divided into their appropriate career clusters. Within each career cluster, programs are listed alphabetically. Each program identifies: (1) Core Sequence; (2) Complementary Course(s); and (3) State Skill Standards. An example for Animation is shown below.

| PROGRAM NAME | COURSE SEQUENCE | STATE SKILL STANDARDS* |
|---|---|---|
| Animation | **Core Course Sequence**<br>Animation I<br>Animation II<br>Animation III<br>**Complementary Course(s)**<br>Animation II LAB **<br>Animation III LAB **<br>Animation Advanced Studies | Animation<br>*TBD* |

The **core course sequence** identifies the courses listed in sequential order required for the complete delivery of the state standards for that program.

**Complementary courses** are those courses that directly support additional time and instruction of the state standards, or may align to the student's program of study. Complementary courses are considered additional courses and do not count towards a student's progression to a "Completer" status and are not to be used in lieu of the courses in the core sequence for program completion. The use of complementary courses must follow the sequence allowance rules listed in the following table.

| SEQUENCING ALLOWANCES FOR COMPLEMENTARY COURSES |
|---|
| Complementary courses may be added to a student's program of study if all of the following are met:<br>• enrollment in a complementary course should not impede the completion of a core course sequence<br>• the course relates to the student's program of study<br>• the student's schedule allows for additional courses<br>• the course is an approved course in the Nevada CTE Course Catalog<br>• prerequisites of the course must be followed |

The **state standards** column identifies the CTE state standards developed for the course sequence. CTE state standards are or will be developed for all programs, and will be revised and updated as needed or according to a pre-determined schedule. (The CTE state standards labeled with "*TBD*" indicates "To Be Developed".) The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences. Technical assessments will be implemented for those programs with current industry validated standards.

## COURSE LISTINGS

The course listings are organized alphabetically within each program area's career cluster and include the following elements: (1) Course Title; (2) Abbreviated Name; (3) Credits; (4) Course Level; (5) Classification of Instructional Program Code (CIP Code); (6) Prerequisites; and (7) Course Description. An example for a Business Management course is shown below.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Business Management I** | **BUS MGMT I** | **1** | **L2** | **52.0201** |
| *Prerequisite: Principles of Business and Marketing*<br>This course is a continuation of the Business Management program. The course addresses several types of management, including customer relationship management, human resources management, information management, knowledge management, project management, quality management, risk management, and strategic management. Economics, finance, operations, and professional development are also emphasized throughout the course. The appropriate use of technology and industry-standard equipment is an integral part of this course. | | | | |

The **course titles**, **abbreviated names**, **levels**, and **CIP codes** are to be used locally exactly as written in this catalog. This is especially important since it is those titles, abbreviations, levels, and CIP codes that will populate the System for Accountability Information in Nevada (SAIN). Through accurate use of the titles, abbreviated names, levels, and CIP codes, the CTE data reporting will be equally consistent and accurate. Furthermore, the data system will not accept course names, abbreviations, levels, and CIP codes that are inconsistent with those in this catalog.

CTE is largely defined by courses that meet the description above and are one (1) **credit** in length. Exceptions to one credit courses are permitted for national program curriculum designs, such as those required by the National Academy Foundation, High Schools of Business, and others.

The **course level** determines the order in which courses will be taught. In a designated sequence, for example, a level 2 course (L2) is taught after the level 1 course (L1) in the same sequence. The CTE

program should follow the sequence in order for the student to complete all state standards and be prepared for the end-of-program technical assessment. The end-of-program technical assessment will be administered in the completion course (L2C, L3C, or L4C) for those programs for which assessments have been developed. The following table describes each level.

| LEVEL | DESCRIPTION |
|---|---|
| **L1** | Introductory level 1 course |
| **L1L** | Introductory level 1 course lab * (concurrent enrollment in L1 required) |
| **L2** | Intermediate level 2 course |
| **L2L** | Intermediate level 2 course lab * (concurrent enrollment in L2 or L2C required) |
| **L2C** | Completion level 2 course per state standards (CTE assessments given) |
| **L3** | Advanced level 3 course |
| **L3L** | Advanced level 3 course lab * (concurrent enrollment in L3 or L3C required) |
| **L3C** | Completion level 3 course per state standards (CTE assessments given) |
| **L4C** | Completion level 4 course per state standards (CTE assessments given) |
| **L4L** | Completion level 4 course lab * (concurrent enrollment in L4C required) |
| **AS** | Advanced Studies level course ** (above and beyond the state standards) |
| **WK** | Work Experience *** |

* Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

** Advanced Studies courses allow students to continue taking courses beyond the completion level courses and are repeatable.

*** Work Experience courses must follow NAC 389.562, 389.564, and 389.566 regulations.

Lastly, a **course description** is provided for each course. The descriptions are fairly general and are intended to be used by school districts and schools for their annual catalogs, registration materials, etc. The description may be enhanced or modified as desired at the local level.

## CTE ASSESSMENTS

There are two types of CTE assessments: (1) Workplace Readiness Skills Assessment, which measures the employability skills (soft skills) needed to be successful in all careers; and (2) end-of-program technical assessments, which are program specific and measure the skill attainment of a student who has completed a program course sequence. These assessments are web-based and aligned to the program specific state standards. Both CTE assessments are required by the Nevada Administrative Code. (Paragraph (d-e) of Subsection 1 of NAC 389.800)

## CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSOS)

To further the development of leadership and technical skills, students have opportunities to participate in one or more Career and Technical Student Organizations (CTSOs). CTSOs develop character, citizenship, and the technical, leadership and teamwork skills essential for the workforce and their further education. Their activities are considered a part of the instructional day when they are directly related to the competencies and objectives in the course. The six approved CTSOs are shown below:

- DECA
- FBLA
- FCCLA
- FFA
- HOSA
- SkillsUSA

## CATALOG UPDATES AND REVISIONS

The CTE Course Catalog will be updated and presented to the State Board of Education/State Board for Career and Technical Education on an annual basis. Courses and course sequences may be added to this catalog only through the application process approved by the Department of Education.

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# AGRICULTURE

# &

# NATURAL RESOURCES

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Agriculture, Food & Natural Resources*

- Agricultural Mechanics Technology
- Agriculture Business Systems
- Agriculture Leadership, Communication & Policy
- Animal Science
- Environmental Management
- Floriculture Design & Management
- Food Science Technology
- Landscape Design & Management
- Natural Resources & Wildlife Management
- Ornamental Horticulture/Greenhouse Management
- Veterinary Science

# PROGRAM COURSE SEQUENCES

## AGRICULTURE & NATURAL RESOURCES

### AGRICULTURE, FOOD & NATURAL RESOURCES

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Agricultural Mechanics Technology | **Core Course Sequence**<br>Agricultural Mechanics Technology I<br>Agricultural Mechanics Technology II<br>Agricultural Mechanics Technology III<br>**Complementary Course(s)**<br>Agricultural Mechanics Technology Advanced Studies | Agricultural Mechanics Technology |
| Agriculture Business Systems | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Agriculture Business<br>**Complementary Course(s)**<br>Agriculture Business Advanced Studies | Agriculture Science<br>&<br>Agriculture Business Systems |
| Agriculture Leadership, Communication and Policy | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Agriculture Leadership Communication and Policy<br>**Complementary Course(s)**<br>Agriculture LCP Advanced Studies | Agriculture Science<br>&<br>Agriculture Leadership, Communication and Policy |
| Animal Science | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Animal Science<br>**Complementary Course(s)**<br>Animal Science Advanced Studies | Agriculture Science<br>&<br>Animal Science |
| Environmental Management | **Core Course Sequence**<br>Environmental Management I<br>Environmental Management II<br>Environmental Management III<br>**Complementary Course(s)**<br>Environmental Management Advanced Studies | Environmental Management |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

| AGRICULTURE, FOOD & NATURAL RESOURCES (CONT.) | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Floriculture Design and Management | **Core Course Sequence**<br>Agriculture Science I *or* Horticulture Science<br>Plant Science and Ornamental Horticulture<br>Floriculture<br>**Complementary Course(s)**<br>Floriculture Advanced Studies | Agriculture Science<br>*or*<br>Horticulture Science<br>*&*<br>Ornamental Horticulture/Greenhouse Management<br>*&*<br>Floriculture Design and Management |
| Food Science Technology | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Food Science Technology<br>**Complementary Course(s)**<br>Food Science Technology Advanced Studies | Agriculture Science<br>*&*<br>Food Science Technology<br>*TBD* |
| Landscape Design and Management | **Core Course Sequence**<br>Agriculture Science I *or* Horticulture Science<br>Landscaping I<br>Landscaping II<br>**Complementary Course(s)**<br>Landscaping Advanced Studies | Agriculture Science<br>*or*<br>Horticulture Science<br>*&*<br>Landscape Design and Management |
| Natural Resources and Wildlife Management | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Natural Resources and Wildlife Management<br>**Complementary Course(s)**<br>Natural Resources and Wildlife Management Advanced Studies | Agriculture Science<br>*&*<br>Natural Resources and Wildlife Management |
| Ornamental Horticulture/Greenhouse Management | **Core Course Sequence**<br>Agriculture Science I *or* Horticulture Science<br>Plant Science and Ornamental Horticulture<br>Greenhouse Management<br>**Complementary Course(s)**<br>Greenhouse Management Advanced Studies | Agriculture Science<br>*or*<br>Horticulture Science<br>*&*<br>Ornamental Horticulture/Greenhouse Management |
| Veterinary Science | **Core Course Sequence**<br>Agriculture Science I<br>Agriculture Science II<br>Veterinary Science<br>**Complementary Course(s)**<br>Veterinary Science Advanced Studies | Agriculture Science<br>*&*<br>Veterinary Science |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

# COURSE DESCRIPTIONS

## AGRICULTURE, FOOD & NATURAL RESOURCES

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agricultural Mechanics Technology I** | **AG MECH TECH I** | **1** | **L1** | **01.0205** |

*Prerequisite: None*

This course will introduce students into the foundation skills necessary for agriculture mechanics and industry employment. Areas of study may include general shop safety, basic welding, electrical applications, water management, agricultural drafting and construction, engines and power, and machinery maintenance and repair. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agricultural Mechanics Technology II** | **AG MECH TECH II** | **1** | **L2** | **01.0205** |

*Prerequisite: Agricultural Mechanics Technology I*

This course is a continuation of Agriculture Mechanics Technology I. It allows intermediate agriculture students to expand on skills and knowledge from Agriculture Mechanical Engineering Technology I. Areas of study may include general shop safety, basic welding, electrical applications, water management, agricultural drafting and construction, engines and power, and machinery maintenance and repair. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agricultural Mechanics Technology III** | **AG MECH TECH III** | **1** | **L3C** | **01.0205** |

*Prerequisite: Agricultural Mechanics Technology II*

This course is a continuation of Agricultural Mechanics Technology II. This course provides advanced agriculture students with instructions in advanced techniques and processes such as electrical controls and maintenance; basic construction and pipe fitting techniques; welding: GMAW, GTAW, and plasma cutting; agricultural machinery operation and repair; hydraulics; and electrical power, motor and control systems. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agricultural Mechanics Technology Advanced Studies** | **AG MECH TECH AS** | **1** | **AS** | **01.0205** |

*Prerequisite: Agricultural Mechanics Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture Business** | **AG BUSINESS** | **1** | **L3C** | **01.0102** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This course provides advanced agriculture students with the information and skills necessary for success in agribusiness and in operating entrepreneurial ventures in the agricultural industry. These courses may cover topics such as economic principles, business planning and human resources, risk management, financial concepts, marketing, and sales strategies. Other possible topics include developing a business plan, employee/employer relations, problem-solving and decision making, commodities, and building leadership skills. These courses may also incorporate a survey of the careers within the agricultural industry. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture Business Advanced Studies** | **AG BUSINESS AS** | **1** | **AS** | **01.0102** |

*Prerequisite: Agriculture Business*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture Leadership Communication and Policy** | **AG LEADERSHIP** | **1** | **L3C** | **01.0899** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This program provides advanced agriculture students with instruction on leadership and communication skills with a focus on opportunities in the agriculture industries. Topics will include personal leadership development, group leadership skills, research methodology, verbal and written communications, journalism, agriculture public policy and human relations. Other topics may include problem solving and decision making and teamwork skills. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture LCP Advanced Studies** | **AG LEADERSHIP AS** | **1** | **AS** | **01.0899** |

*Prerequisite: Agriculture Leadership, Communication and Policy*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture Science I** | **AG SCIENCE I** | **1** | **L1** | **01.0000** |

*Prerequisite: None*

This course is an introduction and survey course of the many career areas in agriculture. Topics include scientific investigations in agriculture, basic animal science, basic plant and soil science, ornamental horticulture, natural resource management, business management, leadership and communication through FFA, and career skills. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Agriculture Science II** | **AG SCIENCE II** | **1** | **L2** | **01.0000** |

*Prerequisite: Agriculture Science I*

This course is a continuation of Agriculture Science I. This course allows intermediate students to expand on skills and knowledge from Agriculture Science I. Areas of study include scientific investigations in agriculture, plant and soil sciences, agriculture sales and marketing, ornamental horticulture, animal sciences and natural resource management. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animal Science** | **ANIMAL SCI** | **1** | **L3C** | **01.0901** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This course allows advanced students to expand on skills and knowledge from Agriculture Science II while exploring the livestock and red meat industry. This course covers the basic anatomy and physiology of domestic animals, genetics, reproduction, animal health and welfare, evaluation and selection of animals, land stewardship and marketing. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animal Science Advanced Studies** | **ANIMAL SCI AS** | **1** | **AS** | **01.0901** |

*Prerequisite: Animal Science*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Environmental Management I** | **ENVIRON MGMT I** | **1** | **L1** | **03.0101** |

*Prerequisite: None*

This course is an introduction to environmental management. Areas of study include ecological concepts and scientific principles related to environmental science, scientific investigation, soils, sustainable use including composting, recycling and hydroponics, and environmental issues. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Environmental Management II** | **ENVIRON MGMT II** | **1** | **L2** | **03.0101** |

*Prerequisite: Environmental Management I*

This course is a continuation of Environmental Management I. This course will provide intermediate students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Environmental Management I. Areas of study include population ecology, air and water quality, soils, mineral extraction, environmental site management, conventional and renewable energy resources, and career exploration. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Environmental Management III** | **ENVIRON MGMT III** | **1** | **L3C** | **03.0101** |

*Prerequisite: Environmental Management II*

This course is a continuation of Environmental Management II. This course will provide advanced students with instruction in environmental site management, law and public policy, GPS and GIS, and hydrology and hydrogeology. The students will continue to develop all skills learned in Environmental Management I and II. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Environmental Management Advanced Studies** | **ENVIRON MGMT AS** | **1** | **AS** | **03.0101** |

*Prerequisite: Environmental Management III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Floriculture** | **FLORAL** | **1** | **L3C** | **01.0608** |

*Prerequisite: Plant Science and Ornamental Horticulture*

This course is a continuation of Ornamental Horticulture. This course is the study of the science, business and design principles of floriculture. Areas of study include the history of floral design, the use of color, tools and principles of design in floral arrangements, plant identification, care and processing of cut flowers, marketing and sales, record keeping and floral business management. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Floriculture Advanced Studies** | **FLORAL AS** | **1** | **AS** | **01.0608** |

*Prerequisite: Floriculture*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Food Science Technology** | **FOOD SCI TECH** | **1** | **L3C** | **01.1002** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This course allows advanced students to expand on skills and knowledge from Agriculture Science II while exploring the basic laws of chemistry, microbiology, and physics applied to the production, processing, preservation, and packaging of food. Experimentation will allow students to see how scientific principles are involved in food preparation, handling, and storage. Students will have the opportunity to apply basic math and technical writing skills to solve real-world problems and work with the operation and maintenance of related food handling and processing equipment and facilities. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Food Science Technology Advanced Studies** | **FOOD SCI TECH AS** | **1** | **AS** | **01.1002** |

*Prerequisite: Food Science Technology*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Greenhouse Management** | **GREENHOUSE MGMT** | **1** | **L3C** | **01.0604** |

*Prerequisite: Plant Science and Ornamental Horticulture*

This course is a continuation of Ornamental Horticulture. This course provides advanced agriculture students a technical understanding and working knowledge of the greenhouse industry. Topics include safety, plant physiology, growing media, plant nutrition, integrated pest management, propagation, growing greenhouse crops and greenhouse business concepts. Students will gain knowledge and skills related to the care and management of gardens and greenhouses. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Greenhouse Management Advanced Studies** | **GREENHOUSE MGMT AS** | **1** | **AS** | **01.0604** |

*Prerequisite: Greenhouse Management*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Horticulture Science** | **HORTICULTURE SCI** | **1** | **L1** | **01.1103** |

*Prerequisite: None*

This course is an introductory course into the horticulture industry. Areas of study include scientific investigations in horticulture, basic plant processes and anatomy, soils, plant propagation, plant growth requirements, cultivation practices, business management, horticulture and environment, and leadership and career skills. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Landscaping I** | **LANDSCAPE I** | **1** | **L2** | **01.0605** |

*Prerequisite: Agriculture Science I or Horticulture Science*

This course is a continuation of Ag Science I or Horticulture Science I. This course is designed to provide students with instruction in many aspects of the landscape industry, including safety, plant identification, analyzing the landscape site, designing the landscape, selecting plants for the design, hardscaping, turf installation and management, pruning, and integrated pest management. The use of technology is an integral part of this course. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Landscaping II** | **LANDSCAPE II** | **1** | **L3C** | **01.0605** |

*Prerequisite: Landscaping I*

This course is a continuation of Landscaping I. This course is designed to provide students with advanced instruction in landscaping including: applying the principles and elements of design, selecting plant materials, hardscaping, irrigation, installation techniques and integrated pest management. The use of technology is an integral part of this course. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Landscaping Advanced Studies** | **LANDSCAPE AS** | **1** | **AS** | **01.0605** |

*Prerequisite: Landscaping II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Natural Resources and Wildlife Management** | **NAT RES MGMT** | **1** | **L3C** | **03.0601** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This course introduces advanced agriculture students to concepts of natural resource science and management. This will include ecological concepts and scientific principles, rangeland management, fire ecology, GPS and GIS, fish and wild ecology, forestry, renewable and nonrenewable resources, and fish and wildlife management. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Natural Resources and Wildlife Management Advanced Studies** | **NAT RES MGMT AS** | **1** | **AS** | **03.0601** |

*Prerequisite: Natural Resources and Wildlife Management*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Plant Science and Ornamental Horticulture** | **PLANT SCI HORT** | **1** | **L2** | **01.0603** |

*Prerequisite: Agriculture Science I or Horticulture Science*

This course is a continuation of Agriculture Science I or Horticulture Science. This course is designed to introduce the intermediate agriculture student to the skills and knowledge needed in order to successfully grow and care for plants. Areas emphasized include: plant anatomy and physiology, plant identification, propagation, growing media, nutrition, and plant technologies. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Veterinary Science** | **VETERINARY SCI** | **1** | **L3C** | **01.0903** |

*Prerequisite: Agriculture Science II*

This course is a continuation of Agriculture Science II. This course is designed to introduce advanced agriculture students to the technical understanding and working knowledge of the veterinary medicine industry. Topics to be covered include safety and sanitation, veterinary medical terminology, disease prevention and control, basic laboratory techniques, office and clinical procedures, medical math, legal practices in a veterinary clinical setting, ethical and animal welfare issues, and clinical examinations. An essential part of this course will be leadership activities and Supervised Agriculture Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Veterinary Science Advanced Studies** | **VETERINARY SCI AS** | **1** | **AS** | **01.0903** |

*Prerequisite: Veterinary Science*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Agriculture Food and Natural Resources** | **WORK EXPER AFNR** | **1** | **WK** | **99.0001** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

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# BUSINESS

# &

# MARKETING EDUCATION

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Business, Management & Administration*

- Administrative Services
- Business Management

### *Finance*

- Accounting & Finance

### *Marketing, Sales & Service*

- Entrepreneurship
- Marketing
- Sports & Entertainment Marketing

# PROGRAM COURSE SEQUENCES

## BUSINESS & MARKETING EDUCATION

### BUSINESS, MANAGEMENT & ADMINISTRATION

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Administrative Services | **Core Course Sequence**<br>Business Software Applications<br>Office Management I<br>Office Management II<br>**Complementary Course(s)**<br>Office Management Advanced Studies | Administrative Services |
| Business Management | **Core Course Sequence**<br>Principles of Business and Marketing ◊<br>Business Management I<br>Business Management II<br>**Complementary Course(s)**<br>Business Management Advanced Studies | Business Management |
| | **High School of Business ™**<br>HSB-Principles of Business / HSB-Business Economics<br>HSB-Principles of Marketing / HSB-Principles of Finance<br>HSB-Principles of Management / HSB-Business Strategies<br>**Complementary Course(s)**<br>HSB-Leadership<br>HSB-Wealth Management | |

### FINANCE

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Accounting and Finance | **Core Course Sequence**<br>Accounting and Finance I<br>Accounting and Finance II<br>Accounting and Finance III<br>**Complementary Course(s)**<br>Accounting and Finance Advanced Studies | Accounting and Finance |
| National Academy Foundation Academy of Finance | **Core Course Sequence**<br>NAF-Principles of Finance / NAF-Business Economics<br>NAF-Financial Services / NAF-Business in a Global Economy<br>NAF-Ethics in Business / NAF-Insurance<br>**Complementary Course(s)**<br>NAF-Principles of Accounting<br>NAF-Entrepreneurship<br>NAF-Managerial Accounting<br>NAF-Applied Finance<br>NAF-Financial Planning | Business Management |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

◊ Course description listed in the Marketing, Sales & Service section

| MARKETING, SALES & SERVICE | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Entrepreneurship | **Core Course Sequence**<br>Principles of Business and Marketing<br>Entrepreneurship I<br>Entrepreneurship II<br>**Complementary Course(s)**<br>Entrepreneurship Advanced Studies | Entrepreneurship |
| Marketing | **Core Course Sequence**<br>Principles of Business and Marketing<br>Marketing I<br>Marketing II<br>**Complementary Course(s)**<br>Marketing Advanced Studies | Marketing |
| Sports and Entertainment Marketing | **Core Course Sequence**<br>Principles of Business and Marketing<br>Sports and Entertainment Marketing I<br>Sports and Entertainment Marketing II<br>**Complementary Course(s)**<br>Sports and Entertainment Marketing Advanced Studies | Sports and Entertainment Marketing |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

# COURSE DESCRIPTIONS

## BUSINESS, MANAGEMENT & ADMINISTRATION

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Business Management I** | **BUS MGMT I** | **1** | **L2** | **52.0201** |

*Prerequisite: Principles of Business and Marketing*

This course is a continuation of the Business Management program. The course addresses several types of management, including customer relationship management, human resources management, information management, knowledge management, project management, quality management, risk management, and strategic management. Economics, finance, operations, and professional development are also emphasized throughout the course. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Business Management II** | **BUS MGMT II** | **1** | **L3C** | **52.0201** |

*Prerequisite: Business Management I*

This course is a continuation of the Business Management program and focuses predominantly on financial analysis that supports economic decision-making in business. It includes specialist- and management-level skills such as interpreting financial statements; calculating financial ratios; developing budgets; forecasting sales; and much more. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Business Management Advanced Studies** | **BUS MGMT AS** | **1** | **AS** | **52.0201** |

*Prerequisite: Business Management II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Business Software Applications** | **BUS SOFT APPS** | **1** | **L1** | **52.0407** |

*Prerequisite: None*

This course is for entry-level students in Administrative Services. This program prepares students for jobs in an office or business setting in the area of administrative support and office management. This course emphasizes skills in standard industry software. Students will gain proficiency of advanced web functions, word-processing applications, spreadsheet applications, presentation applications and database applications as they are used in a business environment. Student will understand and abide by policies for technology.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Business Economics** | **HSB BUS ECONOMICS** | **.5** | **L1** | **52.0601** |

*Prerequisite: HSB-Principles of Business*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

In Business Economics, a project-based business course, students expand their understanding that businesses are influenced by external factors that are often beyond their control. Consumer spending, government policies, economic conditions, legal issues, and global competition are addressed through practical, current applications to everyday societal and business life. Decision matrices are introduced, and the importance and costs of quality are stressed. Students develop their knowledge and skills in such areas as economics, entrepreneurship, operations, and professional development. Throughout the course, students will be presented with current economic problems for which they are asked to determine solutions, often through the application of decision matrices

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Business Strategies** | **HSB BUS STRATEGY** | **.5** | **L3C** | **52.0299** |

*Prerequisite: HSB-Principles of Management*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

Business Strategies serves as the capstone course for the High School of Business™ program. Students employ their decision matrices to finalize marketing, financial, and management plans developed previously, incorporating them into a business plan for a non-profit organization. The non-profit venture is actualized during the course, requiring students to engage in risk assessment, strategic planning, and performance assessment.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Leadership** | **HSB LEADERSHIP** | **.5** | **L1** | **52.0213** |

*Prerequisite: None*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

Leadership, a project-based leadership course, develops student understanding and skills in such areas as communication skills, emotional intelligence, operations, and professional development. Students acquire an understanding and appreciation of the need for leadership skills. To encourage immediate implementation of leadership skills, Leadership utilizes an on-going service-learning project for course delivery and reinforcement. The course content is sequenced for students to identify, plan, implement, and evaluate a service-learning project based on the needs of their community/school. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills. Formal reflection is an on-going component of the course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Principles of Business** | **HSB PRIN BUSINESS** | **.5** | **L1** | **52.0101** |

*Prerequisite: None*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

Principles of Business, a project-based business course, develops student understanding and skills in such areas as business law, economics, financial analysis, human resources management, information management, marketing, operations, and strategic management. Through the use of three projects, students acquire an understanding and appreciation of the business world. They develop a business analysis report, conduct an environmental scan of the local business community, and investigate business activities. Current technology will be used to acquire information and to complete the projects. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills. Formal reflection is an on-going component of the course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Principles of Finance** | **HSB PRIN FINANCE** | **.5** | **L2** | **52.0801** |

*Prerequisite: HSB-Principles of Marketing*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

Principles of Finance furthers student understanding of two specific business activities—accounting and finance—that were introduced in an earlier High School of Business course, Principles of Business. Through multiple projects, students make connections between accounting, with an emphasis on cash flow, and finance, with an emphasis on decision-making. Students acquire an understanding of financial statements, calculate financial ratios, and make business decisions based on their interpretation of those financial statements and ratios. In addition, students determine business-financing options, as well as develop an appreciation for types of financial service providers and financial markets. Decision matrices are employed to aid in financial planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Principles of Management** | **HSB PRIN MGMT** | **.5** | **L3** | **52.0201** |

*Prerequisite: HSB- Principles of Finance*

***Schools must be affiliated with the High Schools of Business™ program to offer this course***

Principles of Management is a project-based business course that expands student understanding of management. Students acquire an appreciation for aspects of management, such as project management, human resources management, knowledge management, quality management, and risk management. In addition, ethical and legal considerations affecting business activities are stressed, and students develop managerial and supervisory skills through interaction with lower grade-level High School of Business™ students. Decision matrices are employed to aid in management planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Principles of Marketing** | **HSB PRIN MKTG** | **.5** | **L2** | **52.1401** |

*Prerequisite: HSB-Business Economics*

***Schools must be affiliated with the High Schools of Business™ program to offer this course****

Principles of Marketing is a project-based business course that develops student understanding and skills in the functional areas of marketing: channel management, marketing-information management, market planning, pricing, product/service management, promotion, and selling. Students acquire an understanding and appreciation of each of the marketing functions and their ethical and legal issues. Decision matrices are employed to aid in market planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **HSB-Wealth Management** | **HSB WEALTH MGMT** | **.5** | **L1** | **52.0804** |

*Prerequisite: None*

***Schools must be affiliated with the High Schools of Business™ program to offer this course****

This project-based financial literacy and investment course develops student understanding and skills in such areas as personal finance, types of investment, the stock market, and stock valuation. Students acquire an understanding and appreciation of the need for personal financial management and investing. To encourage immediate implementation of financial literacy and investment skills, Wealth Management utilizes an on-going investment project for course delivery and reinforcement. The course content is sequenced for students to develop a diversified, balanced investment portfolio based both on their interest in products and companies and on fundamental analysis. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Office Management I** | **OFFICE MGMT I** | **1** | **L2** | **52.0204** |

*Prerequisite: Business Software Applications*

This course is a continuation of the Administrative Services programs. Students will learn occupational skills in accounting such as recording business transactions, posting journal and ledger entries, and preparing financial statements. Students will be introduced to standard accounting software and expand their knowledge of standard office software. Additionally, an introduction to laws related to business practices, organizational structures and interpersonal office skills will be covered. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Office Management II** | **OFFICE MGMT II** | **1** | **L3C** | **52.0204** |

*Prerequisite: Office Management I*

This course is a continuation of the Administrative Services program and prepares students for work in an office or business environment. Students will learn and apply advanced skills in office technology and software commonly used in today's work environment. This course also includes the understanding of employment law and supervision. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Office Management Advanced Studies** | **OFFICE MGMT AS** | **1** | **AS** | **52.0204** |

*Prerequisite: Office Management II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Business Management and Administration** | **WORK EXPER BUS ADM** | **1** | **WK** | **99.0004** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## FINANCE

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Accounting and Finance I** | **ACCT FINANCE I** | **1** | **L1** | **52.0304** |

*Prerequisite: None*

This course is an introduction to both accounting and finance. This course is an introduction to accounting processes, practices, and concepts as well as an introduction to the world of finance. Topics include debits and credits, career pathways, and a survey of the many industries associated with accounting and finance such as accounting, banking, insurance and investments. Students will be introduced to standard accounting software.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Accounting and Finance II** | **ACCT FINANCE II** | **1** | **L2** | **52.0304** |

*Prerequisite: Accounting and Finance I*

This course is a continuation of Accounting and Finance I. Students will learn occupational skills in accounting such as recording business transactions, preparing financial statements, maintaining cash controls and calculating financial ratios. Students will practice using standard accounting software and apply generally accepted accounting principles. Topics will also include regulations related to the banking and finance industries, how managers use financial information generated by accounting departments to influence decision-making. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Accounting and Finance III** | **ACCT FINANCE III** | **1** | **L3C** | **52.0304** |

*Prerequisite: Accounting and Finance II*

This course is a continuation of Accounting and Finance II. Students will learn advanced occupational skills in accounting and how they relate to reports used by managers and directors. Students will learn the importance of accounting data in making decisions through an understanding of financial reports such as profit and loss statements, cash flow statements and pro forma statements. Ethics and regulations will be a discussed throughout this course. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Accounting and Finance Advanced Studies** | **ACCT FINANCE AS** | **1** | **AS** | **52.0304** |

*Prerequisite: Accounting and Finance III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Applied Finance** | **NAF APPLIED FINC** | **.5** | **L3** | **52.0801** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Applied Finance delves into the financial concepts introduced in Principles of Finance. Students learn to identify the legal forms of business organization and continue to develop an understanding of profit. They learn about various financial analysis strategies and the methods by which businesses raise capital. Students also have the chance to explore, in depth, topics of high interest in the field of finance, and explore the types of careers that exist in finance today.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Business Economics** | **NAF BUS ECON** | **.5** | **L1** | **52.0601** |

*Prerequisite: None*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Business Economics introduces students to the key concepts of economics as they pertain to business. This course discusses the American economy and the factors that influence the success of businesses and products. It describes forms of business ownership, discusses the relationship of labor and business, and provides a broad overview of the global economy. Students also examine careers in business, both as employees and as business owners.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Business in a Global Economy** | **NAF BUS GLOB ECON** | **.5** | **L2** | **45.0605** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Business in a Global Economy provides students with an understanding of how and why businesses choose to expand their operations into other countries. This course exposes students to the unique challenges facing firms doing business internationally, and to the potential opportunities available to those businesses.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Entrepreneurship** | **NAF ENTREPRENEUR** | **.5** | **L2** | **52.0701** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Entrepreneurship introduces students to the critical role entrepreneurs play in the national and global economy. Students learn the skills, attitudes, characteristics, and techniques necessary to become successful entrepreneurs. They explore starting a business and learn about the operational issues and financial risks that new businesses face. Students examine ethical issues and develop a framework for managing them.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Ethics in Business** | **NAF ETHICS IN BUS** | **.5** | **L3** | **38.0104** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

This course introduces the importance of ethics in business. Students focus on the significance of ethics to stakeholders; examine who bears responsibility for monitoring ethics; and explore ethical situations common in organizations. Students examine how ethics affects various business disciplines and consider the impact of organizational culture. Students also explore ethics as social responsibility, the evolution of ethics in international business, and how the free market and ethics can coexist.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Financial Planning** | **NAF FINC PLANNING** | **.5** | **L2** | **52.0804** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Financial Planning provides students with an overview of the job of a financial planner. Students learn to consider how all aspects of financial planning might affect a potential client, and learn about the importance of financial planning in helping people reach their life goals. This course includes lessons on saving, borrowing, credit, and all types of insurance, and covers various types of investments. Students also examine careers in financial planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Financial Services** | **NAF FINC SERVICES** | **.5** | **L2** | **52.0803** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

This course gives students an overview of banks and other financial services companies. It introduces students to the origins of money and banking and examines the early history of banking in the United States. Students study the financial services industry and the types of companies it includes in depth. They learn about the services offered by such companies and analyze the ways these companies earn profits. Finally, students examine careers in financial services.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Insurance** | **NAF INSURANCE** | **.5** | **L3C** | **52.1701** |

*Prerequisite: Must complete one or more Level 3 (L3) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

This course introduces students to the insurance industry and to its critical role in the financial services sector and in society. It covers common types of insurance, including life, health and disability, property, liability, and forms of commercial insurance. Students examine the business model underlying the industry and how underwriting, actuarial science, and investment practices affect an insurance company's financial success.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Managerial Accounting** | **NAF MANAGE ACCT** | **.5** | **L2** | **52.0305** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Managerial Accounting introduces the fundamentals of management accounting, including manufacturing and cost accounting, budgeting, accounting for managerial decision-making, and financial statement analysis. Students learn how to use accounting information for internal decision-making and planning and control. Regardless of the career path they choose, this course gives students the financial acumen necessary to make informed personal and business decisions.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Principles of Accounting** | **NAF PRIN ACCT** | **.5** | **L2** | **52.0301** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Principles of Accounting provides students with an understanding of the accounting process and how it facilitates decision making by providing data and information to internal and external stakeholders. Students learn that accounting is an integral part of all business activities. They learn how to apply technology to accounting by creating formulas and inputting data into spreadsheets.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Principles of Finance** | **NAF PRIN FINC** | **.5** | **L1** | **52.0801** |

*Prerequisite: None*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

This is the first course students take in the Academy of Finance and introduces students to the financial world. Students develop financial literacy as they learn about the function of finance in society. They study income and wealth; examine financial institutions; learn how businesses raise capital; and study key investment-related terms and concepts. They also research how innovations have changed the financial services field. Finally, students explore careers that exist in finance today.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Finance** | **WORK EXPER FINANCE** | **1** | **WK** | **99.0006** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## MARKETING, SALES & SERVICE

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Entrepreneurship I** | **ENTREPRENEUR I** | **1** | **L2** | **52.0701** |

*Prerequisite: Principles of Business and Marketing*

This course is a continuation of the Entrepreneurship program. Students will gain knowledge in the nature and scope of entrepreneurship, the impact of entrepreneurship on market economies, marketing functions and economic concepts related to entrepreneurship. Personal traits and behaviors of a successful entrepreneur are also examined. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Entrepreneurship II** | **ENTREPRENEUR II** | **1** | **L3C** | **52.0701** |

*Prerequisite: Entrepreneurship I*

This course is a continuation of the Entrepreneurship program. Students will expand their knowledge of the nature and scope of entrepreneurship, the impact of entrepreneurship on market economies, marketing functions and economic concepts related to entrepreneurship. Business plan development is the key tool by which students will learn concepts. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Entrepreneurship Advanced Studies** | **ENTREPRENEUR AS** | **1** | **AS** | **52.0701** |

*Prerequisite: Entrepreneurship II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Marketing I** | **MKTG I** | **1** | **L2** | **52.1401** |

*Prerequisite: Principles of Business and Marketing*

This course is a continuation of the Marketing and Entrepreneurship programs. Students will learn and practice skills in the functional areas of marketing: channel management, marketing-information management, market planning, market research, pricing, promotion, product management and professional selling. Ethical and legal issues of these functions will be covered. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Marketing II** | **MKTG II** | **1** | **L3C** | **52.1401** |

*Prerequisite: Marketing I*

This course is a continuation of the Marketing and Entrepreneurship programs. Students will learn and practice skills in the functional areas of marketing: channel management, marketing-information management, market planning, market research, pricing, promotion, product management and professional selling. Ethical and legal issues of these functions will be covered. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Marketing Advanced Studies** | **MKTG AS** | **1** | **AS** | **52.1401** |

*Prerequisite: Marketing II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Principles of Business and Marketing** | **PRIN BUS MKTG** | **1** | **L1** | **52.0101** |

*Prerequisite: None*

This course is an entry-level course in the Business Management, Entrepreneurship, Marketing, and Sports & Entertainment Marketing programs that develops student understanding and skill in areas such as business law, communications, customer relations, economics, information management, marketing, and operations. Students acquire knowledge of fundamental business and marketing activities, factors affecting business, develop verbal and written communications skill, and participate in career exploration and planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports and Entertainment Marketing I** | **SPORTS MKTG I** | **1** | **L2** | **52.1499** |

*Prerequisite: Principles of Business and Marketing*

This course is a continuation of a Sports and Entertainment Marketing program. Students will advance their knowledge and skills in promotion, pricing, channel management, marketing-information management, market planning, market research, promotion, product management and professional selling as it relates to sports and entertainment. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports and Entertainment Marketing II** | **SPORTS MKTG II** | **1** | **L3C** | **52.1499** |

*Prerequisite: Sports and Entertainment Marketing I*

This course is a continuation of a Sports and Entertainment Marketing program. Students will advance their knowledge and skills in promotion, pricing, marketing-information management, market research, and development of the marketing plan as it relates to sports and entertainment industries. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports and Entertainment Marketing Advanced Studies** | **SPORTS MKTG AS** | **1** | **AS** | **52.1499** |

*Prerequisite: Sports and Entertainment Marketing II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Marketing Sales and Service** | **WORK EXPER MARKET** | **1** | **WK** | **99.0014** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

# EDUCATION, HOSPITALITY

# &

# HUMAN SERVICES

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Education & Training*

- Early Childhood Education

### *Hospitality & Tourism*

- Baking & Pastry
- Culinary Arts
- Hospitality & Tourism

### *Human Services*

- Cosmetology
- Family & Consumer Sciences
- Foods & Nutrition
- Human Development

# PROGRAM COURSE SEQUENCES

## EDUCATION, HOSPITALITY & HUMAN SERVICES

### EDUCATION & TRAINING

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Early Childhood Education | **Core Course Sequence**<br>Early Childhood Education I<br>Early Childhood Education II<br>Early Childhood Education III<br>**Complementary Course(s)**<br>Human Development I ◊<br>Early Childhood Education II LAB **<br>Early Childhood Education III LAB **<br>Early Childhood Education Advanced Studies | Early Childhood Education |

### HOSPITALITY & TOURISM

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Baking and Pastry | **Core Course Sequence**<br>Culinary Arts I<br>Baking and Pastry I<br>Baking and Pastry II<br>**Complementary Course(s)**<br>Baking and Pastry I LAB **<br>Baking and Pastry II LAB **<br>Baking and Pastry Advanced Studies | Baking and Pastry |
| Culinary Arts | **Core Course Sequence**<br>Culinary Arts I<br>Culinary Arts II<br>Culinary Arts III<br>**Complementary Course(s)**<br>Foods and Nutrition I ◊<br>Culinary Arts II LAB **<br>Culinary Arts III LAB **<br>Culinary Arts Advanced Studies | Culinary Arts |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

◊ Course description listed in the Human Services section.

| HOSPITALITY & TOURISM (CONT.) | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Hospitality & Tourism | **Core Course Sequence**<br>Hospitality and Tourism I<br>Hospitality and Tourism II<br>Hospitality and Tourism III<br>**Complementary Course(s)**<br>Hospitality and Tourism II LAB **<br>Hospitality and Tourism III LAB **<br>Hospitality and Tourism Advanced Studies | Hospitality & Tourism |
| National Academy Foundation Academy of Hospitality & Tourism | **Core Course Sequence**<br>NAF-Principles of Hospitality and Tourism / NAF-Customer Service<br>NAF-Geography for Tourism / NAF-Sustainable Tourism<br>NAF-Hospitality Marketing / NAF-Sports, Entertainment and Event Planning<br>**Complementary Course(s)**<br>Hospitality and Tourism Advanced Studies | Hospitality & Tourism |

| HUMAN SERVICES | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Cosmetology | **Core Course Sequence**<br>Principles of Cosmetology<br>Cosmetology I<br>Cosmetology II | Cosmetology |
| Family and Consumer Sciences | **Core Course Sequence**<br>Foods and Nutrition I<br>Human Development I<br>Fashion Design and Construction I ◊<br>Family and Consumer Sciences<br>**Complementary Course(s)**<br>Housing and Interior Design I ◊ | Family and Consumer Sciences |
| Foods and Nutrition | **Core Course Sequence**<br>Foods and Nutrition I<br>Foods and Nutrition II<br>Foods and Nutrition III<br>**Complementary Course(s)**<br>Foods and Nutrition Advanced Studies | Foods and Nutrition |
| Human Development | **Core Course Sequence**<br>Human Development I<br>Human Development II<br>Human Development III<br>**Complementary Course(s)**<br>Human Development Advanced Studies | Human Development |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

◊ Course Description is listed in the Arts, A/V Technology and Communication Section. (Information & Media Technologies)

# COURSE DESCRIPTIONS

## EDUCATION & TRAINING

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education I** | **EARLY CHILD I** | **1** | **L1** | **13.1210** |

*Prerequisite: None*

This course provides students with an introduction to the principles of early childhood education. This course addresses child development, care, teaching and learning, so that students can guide the development of young children in an educational setting. Study typically includes planning and implementing developmentally appropriate activities, basic health and safety practices, and legal requirements for teaching young children. The appropriate use of technology and industry-standard equipment is an integral part of this course. Students will research the requirements of early childhood education careers and begin to develop a career portfolio.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education II** | **EARLY CHILD II** | **1** | **L2** | **13.1210** |

*Prerequisite: Early Childhood Education I*

This course is a continuation of Early Childhood Education I. This course prepares intermediate early childhood education students to guide the development of young children in an educational setting. Course content includes child development, care, teaching and learning. Project-based learning experiences include planning and implementing developmentally appropriate activities, health and safety practices, and legal requirements of teaching young children. Students will expand their career portfolio. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education II LAB** | **EARLY CHILD II L** | **1** | **L2L** | **13.1210** |

*Prerequisite: Concurrent enrollment in Early Childhood Education II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education III** | **EARLY CHILD III** | **1** | **L3C** | **13.1210** |

*Prerequisite: Early Childhood Education II*

This course is a continuation of Early Childhood Education II. This course provides advanced early childhood education students with instruction in advanced techniques and processes. Students will continue to develop all skills learned in Early Childhood Education I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education III LAB** | **EARLY CHILD III L** | **1** | **L3L** | **13.1210** |

*Prerequisite: Concurrent enrollment in Early Childhood Education III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Early Childhood Education Advanced Studies** | **EARLY CHILD AS** | **1** | **AS** | **13.1210** |

*Prerequisite: Early Childhood Education III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Education and Training** | **WORK EXPER EDUC** | **1** | **WK** | **99.0005** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## HOSPITALITY & TOURISM

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Baking and Pastry I** | **BAKING I** | **1** | **L2** | **12.0501** |

*Prerequisite: Culinary Arts I*

This course is an option following Culinary Arts I. This course allows culinary students more in-depth study of baking and pastry arts. Areas of study include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and methods used in creating breads, pastries, cookies, and other desserts. The fundamentals of dough and basic decorating skills are covered. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Baking and Pastry I LAB** | **BAKING I L** | **1** | **L2L** | **12.0501** |

*Prerequisite: Concurrent enrollment in Baking and Pastry I*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Baking and Pastry II** | **BAKING II** | **1** | **L3C** | **12.0501** |

*Prerequisite: Baking and Pastry I*

This course is a continuation of Baking and Pastry I. This course provides advanced baking students with instruction in advanced techniques and processes. They will continue to develop skills learned in Culinary Arts I and Baking and Pastry I. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Baking and Pastry II LAB** | **BAKING II L** | **1** | **L3L** | **12.0501** |

*Prerequisite: Concurrent enrollment in Baking and Pastry II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Baking and Pastry Advanced Studies** | **BAKING AS** | **1** | **AS** | **12.0501** |

*Prerequisite: Baking and Pastry II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts I** | **CUL ARTS I** | **1** | **L1** | **12.0503** |

*Prerequisite: None*

This course provides students with an introduction to the principles and techniques of commercial food production. The classroom is patterned after industry with emphasis on the standards of food service occupations. Students acquire basic skills in food handling, food and nutritional science, equipment technology, cooking methods, kitchen safety, sanitation procedures, and employability skills.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts II** | **CUL ARTS II** | **1** | **L2** | **12.0503** |

*Prerequisite: Culinary Arts I*

This course is a continuation of Culinary Arts I. This course allows intermediate culinary students to build on fundamental skills developed in Culinary Arts I. Students will receive practical training in areas of food preparation, equipment use, and service. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts II LAB** | **CUL ARTS II L** | **1** | **L2L** | **12.0503** |

*Prerequisite: Concurrent enrollment in Culinary Arts II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts III** | **CUL ARTS III** | **1** | **L3C** | **12.0503** |

*Prerequisite: Culinary Arts II*

This course is a continuation of Culinary Arts II. This course provides advanced culinary students with instruction in advanced techniques and processes. They will continue to develop all skills learned in Culinary Arts I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts III LAB** | **CUL ARTS III L** | **1** | **L3L** | **12.0503** |

*Prerequisite: Concurrent enrollment in Culinary Arts III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Culinary Arts Advanced Studies** | **CUL ARTS AS** | **1** | **AS** | **12.0503** |

*Prerequisite: Culinary Arts III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism I** | **HOSPLTY TOUR I** | **1** | **L1** | **52.0901** |

*Prerequisite: None*

This course provides students with an introduction to the hospitality and tourism industry students will acquire a basic understanding of the industry sectors: lodging, food and beverage, recreation, amusement and attractions, and sales, catering and convention services. Students also study business functions and the importance of guest service. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism II** | **HOSPLTY TOUR II** | **1** | **L2** | **52.0901** |

*Prerequisite: Hospitality and Tourism I*

This course is a continuation of Hospitality and Tourism I. This course allows intermediate hospitality and tourism students to build on fundamental skills developed in hospitality and tourism I. Students will receive additional training in all aspects of hotel and tourism operations, including business functions and guest service. The appropriate use of technology and industry standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism II LAB** | **HOSPLTY TOUR II L** | **1** | **L2L** | **52.0901** |

*Prerequisite: Concurrent enrollment in Hospitality and Tourism II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism III** | **HOSPLTY TOUR III** | **1** | **L3C** | **52.0901** |

*Prerequisite: Hospitality and Tourism II*

This course is a continuation of Hospitality and Tourism II. This course provides advanced hospitality and tourism students with instruction in more advanced concepts related to lodging, food and beverage, recreation, amusement and attractions, sales, catering and convention services as well as business functions and guest service. The appropriate use of technology and industry standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism III LAB** | **HOSPLTY TOUR III L** | **1** | **L3L** | **52.0901** |

*Prerequisite: Concurrent enrollment in Hospitality and Tourism III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Hospitality and Tourism Advanced Studies** | **HOSPLTY TOUR AS** | **1** | **AS** | **52.0901** |

*Prerequisite: Hospitality and Tourism III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Customer Service** | **NAF CUSTOMER SERV** | **.5** | **L1** | **52.0207** |

*Prerequisite: None*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

This course introduces students to the concept of service as a critical component of a hospitality or tourism business. Students analyze both good and poor customer service in a variety of contexts and through various methods. Students explore communication skills and strategies, and they use a problem-solving perspective to understand barriers to communication and good service. They learn various means of measuring the quality of service and explore careers that focus on customer service.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Geography for Tourism** | **NAF GEO TOURISM** | **.5** | **L2** | **52.1906** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

This course introduces students to the importance of geography in the hospitality and tourism industry through the study of travel or "destination" geography. It introduces students to the concepts and vocabulary of geography as they explore the world's geographic regions, focusing on factors that create desirable travel destinations: weather/climate, physical features, cultural elements, and historical interest.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Hospitality Marketing** | **NAF HOSPLTY MKTG** | **.5** | **L3** | **52.1910** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

Hospitality Marketing introduces students to the objectives, strategies, and tools that are important to marketing in the hospitality industry, expanding on topics introduced in Principles of Hospitality and Tourism. Students learn about each phase of marketing and the wide range of options that all marketing managers and business owners consider as they create, or revise, marketing plans. Students also explore career opportunities in the field of hospitality marketing.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Principles of Hospitality and Tourism** | **NAF PRIN HOSPLTY** | **.5** | **L1** | **52.0901** |

*Prerequisite: None*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

This is the first course students take in the Academy of Hospitality & Tourism and provides an overview of the current hospitality and tourism industry. Students learn about the history of the industry, explore traveler motivation and consumer needs, the industry's economic and environmental impacts, domestic and international travel, and sales in tourism. Finally, students explore careers in the hospitality and tourism industry.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Sports, Entertainment and Event Planning** | **NAF EVENT PLANNING** | **.5** | **L3C** | **52.0907** |

*Prerequisite: Must complete one or more Level 3 (L3) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

This course introduces students to the skills and knowledge required in the event planning profession. After studying the steps involved in planning a special event, students learn about event planning in sports. They then examine the unique requirements of event planning in entertainment and the performing arts. Students gain valuable experience in project management that can be applied to any career path. They also examine careers in the field of event planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Sustainable Tourism** | **NAF SUSTAIN TOUR** | **.5** | **L2** | **52.1999** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course***

This course introduces students to the profound changes taking place worldwide in the tourism industry. Students examine the environmental and socioeconomic impacts and interrelationships of tourism, as well as the transition to a greener tourism economy. They explore the ramifications of tourism development in terms of increased sustainability, profitability, and benefits to the surrounding communities, and they examine ecotourism as a model for sustainability.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Hospitality and Tourism** | **WORK EXPER HOSP** | **1** | **WK** | **99.0009** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## HUMAN SERVICES

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Cosmetology I** | **COSMO I** | **6** | **L2** | **12.0401** |

*Prerequisite: Principles of Cosmetology*

The six-credit-block course is designed to prepare students for the Nevada State Board of Cosmetology Licensing Exam and to meet the 1800-hour requirement for licensure. Students have the opportunity to receive a master license that allows them to choose many career options such as a nail technician, aesthetician, or hair stylist. Areas of study include theory and clinical instruction in professional ethics, sanitation, human anatomy, facials, skin care, makeup application, manicures, pedicures, acrylic nails, haircutting, hair coloring, permanent waving, chemical relaxing, and all phases of hair care. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Cosmetology II** | **COSMO II** | **6** | **L3C** | **12.0401** |

*Prerequisite: Cosmetology I*

The six-credit-block course is designed to prepare students for the Nevada State Board of Cosmetology Licensing Exam and to meet the 1800-hour requirement for licensure. Students have the opportunity to receive a master license that allows them to choose many career options such as a nail technician, aesthetician, or hair stylist. Areas of study include theory and clinical instruction in professional ethics, sanitation, human anatomy, facials, skin care, makeup application, manicures, pedicures, acrylic nails, haircutting, hair coloring, permanent waving, chemical relaxing, and all phases of hair care. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Family and Consumer Sciences** | **FACS** | **1** | **L4C** | **19.0101** |

*Prerequisite: Human Development I & Fashion Design and Construction I & Foods and Nutrition I*

This course is the capstone course for the Family and Consumer Sciences program of study. This course provides advanced studies in family and consumer sciences topics to prepare students for adult roles and responsibilities. The major focus is on developing skills for balancing home, work, and life by studying how to be successful with life management, wealth management, family development, home management, health and fitness, and leadership and community participation. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foods and Nutrition I** | **FOODS I** | **1** | **L1** | **19.0501** |

*Prerequisite: None*

This course provides an introduction to the study of foods and nutrition. Emphasis is placed on the exploration of foods and meal planning in relation to nutrition science, fitness, the lifecycle, customs, and preparation techniques. Kitchen safety, sanitation, and resources management are integral parts of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foods and Nutrition II** | **FOODS II** | **1** | **L2** | **19.0501** |

*Prerequisite: Foods and Nutrition I*

This course is a continuation of Foods and Nutrition I. This course provides intermediate students with more advanced activities in food science and nutrition with an introduction to careers in food sciences and food manufacturing industries. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foods and Nutrition III** | **FOODS III** | **1** | **L3C** | **19.0501** |

*Prerequisite: Foods and Nutrition II*

This course is a continuation of Foods and Nutrition II. This course provides advanced foods and nutrition students with instruction in advanced techniques and processes. Students will continue to develop all skills learned in Foods and Nutrition I and II. The appropriate use of technology and industry-stand equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foods and Nutrition Advanced Studies** | **FOODS AS** | **1** | **AS** | **19.0501** |

*Prerequisite: Foods and Nutrition III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Human Development I** | **HUMAN DEVLOP I** | **1** | **L1** | **19.0701** |

*Prerequisite: None*

This course introduces the topic of Human Development. Areas of study include the stages of human growth and development throughout the lifespan with a focus on conception through childhood. Topics include developmental stages and influences on physical, intellectual, social and emotional growth.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Human Development II** | **HUMAN DEVLOP II** | **1** | **L2** | **19.0701** |

*Prerequisite: Human Development I*

This course is a continuation of Human Development I. This course allows intermediate human development students to increase their understanding of human growth and development throughout the lifespan with a focus on adolescence through young adulthood. Topics include developmental stages and influences on physical, intellectual, social and emotional growth.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Human Development III** | **HUMAN DEVLOP III** | **1** | **L3C** | **19.0701** |

*Prerequisite: Human Development II*

This course is a continuation of Human Development II. This course allows advanced human development students to increase their understanding of human growth and development throughout the lifespan with a focus on middle adulthood through late adulthood. Topics include developmental stages and influences on physical, intellectual, social and emotional growth. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Human Development Advanced Studies** | **HUMAN DEVLOP AS** | **1** | **AS** | **19.0701** |

*Prerequisite: Human Development III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Principles of Cosmetology** | **PRIN COSMO** | **1** | **L1** | **12.0401** |

*Prerequisite: None*

This course introduces students to the fundamentals of cosmetology. Areas of study include sanitation procedures, safety requirements, tools, and equipment. The appropriate use of technology is an integral part of this course.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Human Services** | **WORK EXPER HU SERV** | **1** | **WK** | **99.0010** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

# HEALTH SCIENCE

# &

# PUBLIC SAFETY

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Health Science*

- Biomedical
- Dental Assisting
- Emergency Medical Technician
- Health Information Management
- Medical Assisting
- Nursing Assistant
- Pharmacy Practice
- Respiratory Therapy
- Sports Medicine

### *Law, Public Safety, Corrections & Security*

- Criminal Justice
- Emergency Telecommunications
- Fire Science
- Forensic Science
- Law Enforcement

# PROGRAM COURSE SEQUENCES

## HEALTH SCIENCE & PUBLIC SAFETY

### HEALTH SCIENCE

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Biomedical | **Core Course Sequence**<br>Biomedical I<br>Biomedical II<br>Biomedical III<br>**Complementary Course(s)**<br>Biomedical Advanced Studies | Biomedical |
| | **Project Lead The Way™ (PLTW):Biomedical Sciences**<br>PLTW-Principles of Biomedical Sciences<br>PLTW-Human Body Systems<br>PLTW-Medical Interventions<br>PLTW-Biomedical Innovation | |
| Dental Assisting | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Medical Terminology<br>Dental Assisting I<br>Dental Assisting II<br>**Complementary Course(s)**<br>Dental Assisting I LAB **<br>Dental Materials and Radiology<br>Dental Assisting Advanced Studies | Health Science<br>&<br>Dental Assisting<br>*TBD* |
| Emergency Medical Technician | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Emergency Medical Services<br>Emergency Medical Technician<br>**Complementary Course(s)**<br>Foundations of Public Safety ◊<br>Emergency Medical Technician LAB ** | Health Science<br>&<br>Emergency Medical Technician |
| Health Information Management | **Core Course Sequence**<br>Health Science I<br>Health Information Management I<br>Health Information Management II<br>**Complementary Course(s)**<br>Health Information Management Advanced Studies | Health Science<br>&<br>Health Information Management<br>*TBD* |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

◊ Course description listed in the Law, Public Safety, Corrections & Security section.

| HEALTH SCIENCE (CONT.) | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Medical Assisting | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Medical Terminology<br>Medical Assisting<br>**Complementary Course(s)**<br>Health Professions<br>Health Professions LAB **<br>Medical Assisting LAB **<br>Medical Assisting Advanced Studies | Health Science<br>&<br>Medical Assisting |
| Nursing Assistant | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Medical Terminology<br>Nursing Assistant<br>**Complementary Course(s)**<br>Medical Anatomy<br>Human Diseases<br>Nursing Assistant LAB ** | Health Science<br>&<br>Nursing Assistant |
| Pharmacy Practice | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Medical Terminology<br>Pharmacy Practice<br>**Complementary Course(s)**<br>Pharmacy Practice Advanced Studies | Health Science<br>&<br>Pharmacy Practice |
| Respiratory Therapy | **Core Course Sequence**<br>Health Science I<br>Health Science II *or* Medical Terminology<br>Respiratory Therapy I<br>Respiratory Therapy II<br>**Complementary Course(s)**<br>Human Diseases<br>Respiratory Therapy I LAB **<br>Respiratory Therapy II LAB **<br>Respiratory Therapy Practices | Health Science<br>&<br>Respiratory Therapy<br>*TBD* |
| Sports Medicine | **Core Course Sequence**<br>Health Science I<br>Sports Medicine I<br>Sports Medicine II<br>**Complementary Course(s)**<br>Health Science II<br>Sports Medicine Advanced Studies | Health Science<br>&<br>Sports Medicine |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Criminal Justice | **Core Course Sequence**<br>Criminal Justice I *or* Foundations of Public Safety<br>Criminal Justice II<br>Criminal Justice III<br>**Complementary Course(s)**<br>Criminal Justice Advanced Studies | Criminal Justice |
| Emergency Telecommunications | **Core Course Sequence**<br>Emergency Telecommunications I<br>Emergency Telecommunications II<br>**Complementary Course(s)**<br>Foundations of Public Safety<br>Emergency Telecommunications II LAB ** | Emergency Telecommunications<br>*TBD* |
| Fire Science | **Core Course Sequence**<br>Fire Science I<br>Fire Science II<br>Entry Level Firefighting<br>**Complementary Course(s)**<br>Fire Science Advanced Studies | Fire Science |
| Forensic Science | **Core Course Sequence**<br>Forensic Science I *or* Foundations of Public Safety<br>Forensic Science II<br>Forensic Science III<br>**Complementary Course(s)**<br>Forensic Photography<br>Forensic Science Advanced Studies | Forensic Science |
| Law Enforcement | **Core Course Sequence**<br>Law Enforcement I *or* Foundations of Public Safety<br>Law Enforcement II<br>Law Enforcement III<br>**Complementary Course(s)**<br>Law Enforcement Advanced Studies | Law Enforcement |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

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# COURSE DESCRIPTIONS

## HEALTH SCIENCE

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Biomedical I** | **BIOMED I** | **1** | **L1** | **26.0102** |

*Prerequisite: None*

This course introduces students to advanced science courses related to medical fields. Areas of exploration will include infectious, genetic, and life style diseases that are dealt with in the biomedical professions. Topics include medical terminology, nutrition, mitosis and microbiology. Practices incorporate an appreciation of alternative and culturally diverse healthcare contributions by different societies. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Biomedical II** | **BIOMED II** | **1** | **L2** | **26.0102** |

*Prerequisite: Biomedical I*

This course is a continuation of Biomedical I. This course allows intermediate biomedical students to develop their knowledge and skills learned in Biomedical I. Areas of study will include body systems, metabolism, exercise physiology, immunology, and homeostatis. The students will be introduced to the interactions of the human body and design experiments to investigate the structure and function. Topics include histology, sensory response, physiology, ATP and wellness. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Biomedical III** | **BIOMED III** | **1** | **L3C** | **26.0102** |

*Prerequisite: Biomedical II*

This course is a continuation of Biomedical II. This course provides advanced biomedical students with instruction in advanced techniques and processes. The students will be introduced to pathogen defense, molecular biology, oncology and biomedical engineering. Topics include community health, genetics, cancer, and biotechnology. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Biomedical Advanced Studies** | **BIOMED AS** | **1** | **AS** | **26.0102** |

*Prerequisite: Biomedical III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Dental Assisting I** | **DENTAL ASST I** | **1** | **L3** | **51.0601** |

*Prerequisite: Health Science II or Medical Terminology*

This introductory course is designed for the student interested in a career in the dental field. It covers all procedures utilized in the dental office during the practice of dentistry. It gives students a vast knowledge base of dental anatomy, dental disease processes and treatment. It develops the dexterity, knowledge and communication skills needed to work as a dental assistant. Emphasis is placed on developing critical-thinking skills, research skills, and necessary techniques. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Dental Assisting I LAB** | **DENTAL ASST I L** | **1** | **L3L** | **51.0601** |

*Prerequisite: Concurrent enrollment in Dental Assisting I*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Dental Assisting II** | **DENTAL ASST II** | **1** | **L4C** | **51.0601** |

*Prerequisite: Dental Assisting I*

This course is a continuation of Dental Assisting I. This course allows advanced dental assisting students to develop their knowledge and skills learned in Dental Assisting I. Areas of study will include oral pathology, dental medications, legal and ethical issues, and research skills. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Dental Assisting Advanced Studies** | **DENTAL ASST AS** | **1** | **AS** | **51.0601** |

*Prerequisite: Dental Assisting II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Dental Materials and Radiology** | **DENT MAT RADIOLOGY** | **1** | **L3** | **51.0601** |

*Prerequisite: Dental Assisting I*

This course provides students with the principles of dental materials and radiology. Areas of study include laboratory techniques, research skills, and radiology. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Medical Services** | **EMER MED SERVICES** | **1** | **L2** | **51.0810** |

*Prerequisite: Health Science I*

This course is a continuation of Health Science I. This entry-level course is designed for the student interested in a career in the pre-hospital emergency medical provider field. Areas of study include personal safety, patient transport (moving and lifting), basic first aid to include medical and trauma emergencies, and CPR. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Medical Technician** | **EMER MED TECH** | **1** | **L3C** | **51.0904** |

*Prerequisite: Health Science II or Emergency Medical Services*

This course is a continuation of Health Science II or Emergency Medical Services. This course is designed for the student interested in a career in the pre-hospital emergency medical provider field. Areas of study include legal and ethical issues, patient's airway, medical and trauma assessment, and medical documentation. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Medical Technician LAB** | **EMER MED TECH L** | **1** | **L3L** | **51.0904** |

*Prerequisite: Concurrent enrollment in Emergency Medical Technician*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Information Management I** | **HLTH INFO MGMT I** | **1** | **L2** | **51.0707** |

*Prerequisite: Health Science I or Medical Terminology*

This course is designed to familiarize students with computerized account management and to help students develop confidence and skills necessary to become successful users of Medical Account Management software. Areas of study include understanding the legal aspects of HIPAA and responsibilities of a medical office staff; utilizing a computer program to maintain patient files, store information, match CRT and diagnosis codes with treatment procedures and charges; creating insurance claim forms and following the claim until they are reimbursed and perform related tasks; and creating a professional resume and cover letter appropriate for applying for a medical assistant position in a medical practice. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Information Management II** | **HLTH INFO MGMT II** | **1** | **L3C** | **51.0707** |

*Prerequisite: Health Information Management I*

This course is a continuation of Health Information Management I. This course allows advanced health information management students to develop their knowledge and skills learned in Health Information Management I. Emphasis will be placed on advanced records management including EMR Software Programs. Reception office skills will cover telephone, scheduling, medical insurance, HIPAA and legal issues. This is an advanced class and will give students necessary practice and experience to work in a medical front office or related field. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Information Management Advanced Studies** | **HLTH INFO MGMT AS** | **1** | **AS** | **51.0707** |

*Prerequisite: Health Information Management II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Professions** | **HLTH PROFESSIONS** | **1** | **L3** | **51.9999** |

*Prerequisite: Health Science II*

This course is designed to assist students in exploration of a range of health occupations to determine which field best suits their interests, strengths, and abilities. Areas of study include infectious diseases, genetics, medical ethics, nutrition, psychology, pediatrics gerontology, health education, anatomy/physiology, and communication for medical professionals. Students will also be exposed to traditional clinical settings, as well as non-clinical settings such as nutrition, health inspection, communicable diseases, counseling, and alternative medicine. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Professions LAB** | **HLTH PROFESSIONS L** | **1** | **L3L** | **51.9999** |

*Prerequisite: Concurrent enrollment in Health Professions*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Science I** | **HEALTH SCI I** | **1** | **L1** | **51.0000** |

*Prerequisite: None*

This course will introduce students to human structure and function. Areas of study include anatomy, healthcare delivery systems, medical terminology, emergency management, health information technology, and legal practices. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Health Science II** | **HEALTH SCI II** | **1** | **L2** | **51.0000** |

*Prerequisite: Health Science I*

This course is a continuation of Health Science I. This course provides advanced health science students with instruction in advanced techniques and processes. Areas of study include medical ethics, hazardous materials, and safety in the workplace, epidemiology, and green practices in healthcare. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this program, students will be prepared for entry into a medical program at the college level.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Human Diseases** | **HUM DISEASE** | **1** | **L1** | **51.0999** |

*Prerequisite: None*

This course is designed to expose students to information about human diseases, injuries, and conditions of each body system. Students will utilize previously-learned information regarding normal structure and function and assessment to develop an understanding of disease, injury, and condition processes. Case studies will be used to stimulate problem-solving and critical-thinking skills. Additionally, students will study medical asepsis and disease control and wellness and disease prevention.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Medical Anatomy** | **MEDICAL ANAT** | **1** | **L1** | **26.0403** |

*Prerequisite: None*

This course is a survey of the fundamentals of anatomy and physiology. This course is designated as honors level by the accelerated pacing and depth of content. Topics focus on the interrelationships of human body systems that include laboratory experiences, demonstrations, and dissections. Problem solving and case study analysis are an integral part of this course. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Medical Assisting** | **MEDICAL ASST** | **1** | **L3C** | **51.0801** |

*Prerequisite: Health Science II*

This course provides advanced health science students with the skills required for entry-level positions such as administrative medical assistant or clinical medical assistant. Demonstrations and laboratory experiences are an integral part of this course. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to our society. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Medical Assisting LAB** | **MEDICAL ASST L** | **1** | **L3L** | **51.0801** |

*Prerequisite: Concurrent enrollment in Medical Assisting*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Medical Assisting Advanced Studies** | **MEDICAL ASST AS** | **1** | **AS** | **51.0801** |

*Prerequisite: Medical Assisting*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Medical Terminology** | **MEDICAL TERM** | **1** | **L2** | **51.0899** |

*Prerequisite: Health Science I*

This course is designed to introduce students to the vocabulary, knowledge, and skills required for entry into health-related occupations. Students receive instruction in the vocabulary of human anatomy and physiology, basic health care skills, first aid, cardiopulmonary resuscitation (CPR), and healthcare practices. Students' medical, ethical, and legal responsibilities pertaining to future careers in the health field will be integrated into the course. Students will also be introduced to health-related occupational skills required in the world of work.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Nursing Assistant** | **NURSING ASST** | **1** | **L3C** | **51.3902** |

*Prerequisite: Health Science II or Medical Terminology*

This course is designed to provide students with the knowledge and skills required for entry into the healthcare field. Students completing this program, including the clinical practicum, are eligible to apply independently for the Nevada State Board of Nursing Certifying Exam for Nursing Assistants. Due to certification requirements, a student must complete the program in its entirety. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Nursing Assistant LAB** | **NURSING ASST L** | **1** | **L3L** | **51.3902** |

*Prerequisite: Concurrent enrollment in Nursing Assistant*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Pharmacy Practice** | **PHARMACY PRACT** | **1** | **L3C** | **51.0805** |

*Prerequisite: Health Science II or Medical Terminology*

This course provides students with the introduction to the practices and fundamentals of pharmacology. Areas of study include pharmacy, calculations, routes, inventory management, and factors affecting drug activity. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Pharmacy Practice Advanced Studies** | **PHARMACY PRACT AS** | **1** | **AS** | **51.0805** |

*Prerequisite: Pharmacy Practice*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Biomedical Innovation** | **PLTW BIOMED INNOV** | **1** | **AS** | **26.0102** |

*Prerequisite: PLTW-Medical Interventions*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course serves as the capstone course for the Biomedical Sciences Project Lead the Way™ curriculum. Students design innovative solutions for the health challenges of the 21st century. They work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project with a mentor or advisor from a university, hospital, research institution, or the biomedical industry. Throughout the course, students are expected to present their work to an audience of STEM professionals.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Human Body Systems** | **PLTW HUM BODY SYS** | **1** | **L2** | **26.0102** |

*Prerequisite: PLTW-Principles of Biomedical Sciences*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Biomedical Sciences Project Lead the Way™ curriculum. Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real world cases and often play the roles of biomedical professionals to solve medical mysteries.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Medical Interventions** | **PLTW MED INTERVENT** | **1** | **L3C** | **26.0102** |

*Prerequisite: PLTW-Human Body Systems*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Biomedical Sciences Project Lead the Way™ curriculum. Students investigate a variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the life of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body. Students explore how to prevent and fight infection; screen and evaluate the code in human DNA; prevent, diagnose and treat cancer; and prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Principles of Biomedical Sciences** | **PLTW PRIN BIOMED** | **1** | **L1** | **26.0102** |

*Prerequisite: None*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is the entry-level course of the Biomedical Sciences Project Lead the Way™ curriculum. Students investigate various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, medicine, and research processes. This course provides an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Respiratory Therapy I** | **RESP THERAPY I** | **1** | **L3** | **51.0908** |

*Prerequisite: Health Science II or Medical Terminology*

This course provides students with the principles of respiratory therapy. Areas of emphasis include medical terminology, medical math, industry requirements, basic techniques, and procedures. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Respiratory Therapy I LAB** | **RESP THERAPY I L** | **1** | **L3L** | **51.0908** |

*Prerequisite: Concurrent enrollment in Respiratory Therapy I*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Respiratory Therapy II** | **RESP THERAPY II** | **1** | **L4C** | **51.0908** |

*Prerequisite: Respiratory Therapy I*

This course is a continuation of Respiratory Therapy I. This course provides advanced respiratory therapy students with instruction in intermediate techniques and processes. The students will continue to develop all skills learned in Respiratory Therapy I. The appropriate use of technology and industry-standard equipment is an integral part of this course. An internship may be incorporated into the course of study to assist students in making a transition from school to work. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Respiratory Therapy II LAB** | **RESP THERAPY II L** | **1** | **L4L** | **51.0908** |

*Prerequisite: Concurrent enrollment in Respiratory Therapy II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Respiratory Therapy Practices** | **RESP THERAPY PRACT** | **1** | **L3** | **51.0908** |

*Prerequisite: Respiratory Therapy I*

This course provides students with practical applications of respiratory therapy. Areas of study include diagnostic procedures, patient assessment, equipment use, rehabilitation, and the principle of gas exchange. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports Medicine I** | **SPORTS MED I** | **1** | **L2** | **51.0913** |

*Prerequisite: Health Science I*

This course is designed to introduce students to the field of sports medicine. It will provide students the opportunity to explore athletic training and sports medicine related fields. Students will receive instruction in sports medicine terminology, physical fitness, anatomy and physiology, kinesiology, injury evaluation and prevention procedures, and careers in sports medicine. Students will also demonstrate skills in cardiopulmonary resuscitation (CPR), first aid, and sports injury management and rehabilitation. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports Medicine II** | **SPORTS MED II** | **1** | **L3C** | **51.0913** |

*Prerequisite: Sports Medicine I*

This course is a continuation of Sports Medicine I. This course provides advanced sports medicine students with instruction in advanced techniques and processes. This course will give students hands-on experience evaluating injuries commonly sustained by the competitive athlete. It includes all areas of sports medicine such as sports medicine terminology, musculoskeletal anatomy, evaluation, assessment, rehabilitation, and prevention of athletic injuries. Emphasis will be placed on evaluating and assessing athletic injuries. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Sports Medicine Advanced Studies** | **SPORTS MED AS** | **1** | **AS** | **51.0913** |

*Prerequisite: Sports Medicine II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Health Science** | **WORK EXPER HEALTH** | **1** | **WK** | **99.0008** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Criminal Justice I** | **CRIMINAL JUST I** | **1** | **L1** | **43.0104** |

*Prerequisite: None*

This course allows students to develop an understanding of the difference between the civil and criminal codes in the American legal system, with a particular emphasis on criminal and civil cases decided by Nevada courts by Nevada Revised Statutes. Students will explore themes in both civil and criminal law reflecting American social, moral, political and economic values. Students will focus on legal terminology and writing, and courtroom environment. Civil law will give an overview of tort, contract, bankruptcy, and administrative law. Students will focus on criminal law and the various aspects of behavior and actions of citizens, corporations and other associations deemed illegal by state and federal governments.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Criminal Justice II** | **CRIMINAL JUST II** | **1** | **L2** | **43.0104** |

*Prerequisite: Criminal Justice I or Foundations of Public Safety*

This course is a continuation of Criminal Justice I or Foundations of Public Safety. This course allows intermediate criminal justice students to develop their knowledge and skills. Areas of study will include civil law, criminal law, legal and ethical issues, forensics toxicology, laboratory technology, and research skills. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Criminal Justice III** | **CRIMINAL JUST III** | **1** | **L3C** | **43.0104** |

*Prerequisite: Criminal Justice II*

This course is a continuation of Criminal Justice II. This course allows intermediate criminal justice students to develop their knowledge and skills learned in Criminal Justice II. Areas of study will include physical and scientific evidence preservation, interrogations, federal rules, and legalities involving arrests and search and seizure. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Criminal Justice Advanced Studies** | **CRIMINAL JUST AS** | **1** | **AS** | **43.0104** |

*Prerequisite: Criminal Justice III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Telecommunications I** | **EMER TELECOMM I** | **1** | **L1** | **43.0399** |

*Prerequisite: None*

This entry-level course is designed for the student interested in a career in the emergency communications field. Areas of study will include telecommunication centers, dispatching, use of 911 computer systems, participation in emergency scenarios, and call processing. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Telecommunications II** | **EMER TELECOMM II** | **1** | **L2C** | **43.0399** |

*Prerequisite: Emergency Telecommunications I*

This course is a continuation of Emergency Telecommunications I. This course allows advanced emergency telecommunications students to develop their knowledge and skills learned in Emergency Telecommunications I. Areas of study will include instruction using NAED, management of emergency and non-emergency situations, operations of two-way radios, and computer-aided telecommunication software during catastrophic events. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Emergency Telecommunications II LAB** | **EMER TELECOMM II L** | **1** | **L2L** | **43.0399** |

*Prerequisite: Concurrent enrollment in Emergency Telecommunications II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Entry Level Firefighting** | **ENTRY LEVEL FIRE** | **1** | **L3C** | **43.0203** |

*Prerequisite: Fire Science II*

This course is a continuation of Fire Science II. This course allows advanced fire science students to develop their knowledge and skills of advanced principles and procedures employed in fire services. Students will develop response procedures in order to respond to small and catastrophic emergency incidents. Areas of study include incident command systems, fire suppression tactics, EMS training, wildland firefighter Type-2 training, hazardous materials, and technical rescue awareness. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fire Science I** | **FIRE SCI I** | **1** | **L1** | **43.0203** |

*Prerequisite: None*

This course introduces the principles and procedures employed in fire services. Students will practice response procedures in order to respond to small and catastrophic emergency incidents and will study laws, ordinances, regulations and organizational rules that define guidelines that govern emergency fire management. Students will compare career field and related careers to develop a personal perspective and an institutional professional growth plan to develop team building and leadership skills related to fire science.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fire Science II** | **FIRE SCI II** | **1** | **L2** | **43.0203** |

*Prerequisite: Fire Science I*

This course is a continuation of Fire Science I. This course provides fire science students with instruction in advanced techniques and critical thinking. This course provides instruction in the primary factors affecting wildland fire behavior and suppression, fire investigations, fire prevention, CPR/First Aid, engine companies, and potential hazards and human factors on the fire line. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fire Science Advanced Studies** | **FIRE SCI AS** | **1** | **AS** | **43.0203** |

*Prerequisite: Entry Level Firefighting*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Forensic Photography** | **FORENSIC PHOTO** | **1** | **L2** | **43.0199** |

*Prerequisite: Forensic Science I or Foundations of Public Safety*

This course will introduce students to the basic skills related to forensic photography. Areas of study include legal aspects, methods, techniques, and skills associated with crime scene analysis. This course will focus on the techniques and methods that are used with photographic evidence that is a fair and accurate representation of what is depicted at the crime scene. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Forensic Science I** | **FORENSIC SCI I** | **1** | **L1** | **43.0106** |

*Prerequisite: None*

This course introduces the principles and procedures employed in criminal and civil investigations. Areas of study include history of forensic science, types of evidence, careers, legal and ethical issues and exploring crime scenes. Emphasis will be put on gathering information that are used to collect evidence, practice unbiased testimony, crime scene photography and crime scene procedures. The appropriate use of technology and industry-standards equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Forensic Science II** | **FORENSIC SCI II** | **1** | **L2** | **43.0106** |

*Prerequisite: Forensic Science I or Foundations of Public Safety*

This course is a continuation of Forensic Science I. This course allows for students interested in the forensic science field to develop their knowledge and skills in principles and procedures related to laboratory fundamentals and forensic disciplines. Areas of study include biological and chemical hazards, utilization of lab equipment, lab accreditation, examine of evidence, and fingerprinted processes. The appropriate use of technology and industry-standards equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Forensic Science III** | **FORENSIC SCI III** | **1** | **L3C** | **43.0106** |

*Prerequisite: Forensic Science II*

This course is a continuation of Forensic Science II. This course allows advanced forensic science students the opportunity to develop skills in courtroom proceedings and forensic specialties. Areas of study include legal proceedings, examination questioning, death investigations, anthropology, entomology and forensic psychology. Emphasis will be placed on criminal profiling, skeletal remains, pathology, and courtroom personnel. . The appropriate use of technology and industry-standards equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary employment.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Forensic Science Advanced Studies** | **FORENSIC SCI AS** | **1** | **AS** | **43.0106** |

*Prerequisite: Forensic Science III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foundations of Public Safety** | **FOUN PUBLIC SAFETY** | **1** | **L1** | **43.9999** |

*Prerequisite: None*

This course is designed as the foundation for a career pathway in Law, Public Safety, Corrections and Security. Students are introduced to the elements and principles of emergency and fire management services, law enforcement services, legal services, and security and protective services.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Law Enforcement I** | **LAW ENFORCE I** | **1** | **L1** | **43.0107** |

*Prerequisite: None*

This course will provide the foundations for students interested in careers in law enforcement and security. Areas of study include ethics, historical development of law enforcement, legal processes, and healthy wellness. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Law Enforcement II** | **LAW ENFORCE II** | **1** | **L2** | **43.0107** |

*Prerequisite: Law Enforcement I or Foundations of Public Safety*

This course is a continuation of Law Enforcement I or Foundations of Public Safety. This course provides intermediate law enforcement students with instruction in advanced techniques and processes. Areas of study will include basic functions of a law enforcement officer such as patrol functions, ethics, investigations, victimization, and introduction to the criminal justice system. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Law Enforcement III** | **LAW ENFORCE III** | **1** | **L3C** | **43.0107** |

*Prerequisite: Law Enforcement II*

This course is a continuation of Law Enforcement II. This course provides advanced law enforcement students with instruction in advanced techniques and processes. Areas of study will include basic functions of a law enforcement officer such as written agency policies, quality control, procedural law, interrogations, use of force, and emergency management. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Law Enforcement Advanced Studies** | **LAW ENFORCE AS** | **1** | **AS** | **43.0107** |

*Prerequisite: Law Enforcement III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Law Public Safety Corrections and Security** | **WORK EXPER LAW** | **1** | **WK** | **99.0012** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

# INFORMATION

# &

# MEDIA TECHNOLOGIES

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Arts, A/V Technology & Communications*

- Fashion, Textiles & Design
- Graphic Design
- Interior Design
- Photography
- Radio Production
- Theatre Technology
- Video Production

### *Information Technology*

- Animation
- Computer Science
- Digital Game Development
- IT – Networking
- IT – Service and Support
- Web Design and Development

# PROGRAM COURSE SEQUENCES

| INFORMATION & MEDIA TECHNOLOGIES | | |
|---|---|---|
| **ARTS, A/V TECHNOLOGY & COMMUNICATION** | | |
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Fashion, Textiles and Design | **Core Course Sequence**<br>Fashion Design and Construction I<br>Fashion Design and Construction II<br>Fashion Design and Construction III<br>**Complementary Course(s)**<br>Foundations of Design<br>Pattern Drafting<br>Fashion Design and Construction Advanced Studies | Fashion, Textiles and Design |
| Graphic Design | **Core Course Sequence**<br>Graphic Design I<br>Graphic Design II<br>Graphic Design III<br>**Complementary Course(s)**<br>Graphic Design II LAB **<br>Graphic Design III LAB **<br>Graphic Design Advanced Studies | Graphic Design |
| Interior Design | **Core Course Sequence**<br>Interior Design I<br>Interior Design II<br>Interior Design III<br>**Complementary Course(s)**<br>Foundations of Design<br>Interior Design II LAB **<br>Interior Design III LAB **<br>Interior Design Advanced Studies | Interior Design |
| Photography | **Core Course Sequence**<br>Photography I<br>Photography II<br>Photography III<br>**Complementary Course(s)**<br>Photography Advanced Studies | Photography |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| ARTS, A/V TECHNOLOGY & COMMUNICATION (CONT.) | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Radio Production | **Core Course Sequence**<br>Radio Production I<br>Radio Production II<br>Radio Production III<br>**Complementary Course(s)**<br>Radio Production II LAB **<br>Radio Production III LAB **<br>Radio Production Advanced Studies | Radio Production |
| Theatre Technology | **Core Course Sequence**<br>Theatre Technology I<br>Theatre Technology II<br>Theatre Technology III<br>**Complementary Course(s)**<br>Theatre Technology Advanced Studies | Theatre Technology |
| Video Production | **Core Course Sequence**<br>Video Production I<br>Video Production II<br>Video Production III<br>**Complementary Course(s)**<br>Video Production II LAB **<br>Video Production III LAB **<br>Video Production Advanced Studies | Video Production |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| INFORMATION TECHNOLOGY | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Animation | **Core Course Sequence**<br>Animation I<br>Animation II<br>Animation III<br>**Complementary Course(s)**<br>Animation II LAB **<br>Animation III LAB **<br>Animation Advanced Studies | Animation |
| Computer Science | **Core Course Sequence**<br>Computer Science I<br>Computer Science II<br>Computer Science III *or* AP Computer Science A<br>**Complementary Course(s)**<br>Computer Science II LAB **<br>Computer Science III LAB **<br>Computer Science Advanced Studies | Computer Science |
| Digital Game Development | **Core Course Sequence**<br>Digital Game Development I<br>Digital Game Development II<br>Digital Game Development III<br>**Complementary Course(s)**<br>Digital Game Development II LAB **<br>Digital Game Development III LAB **<br>Digital Game Development Advanced Studies | Digital Game Development |
| Information Technology Networking | **Core Course Sequence**<br>IT Networking I<br>IT Networking II<br>IT Networking III<br>**Complementary Course(s)**<br>IT Networking Advanced Studies | Information Technology Networking |
| Information Technology Service and Support | **Core Course Sequence**<br>IT Essentials I<br>IT Essentials II<br>**Complementary Course(s)**<br>IT Essentials Advanced Studies | Information Technology Service and Support |
| National Academy Foundation Academy of Information Technology | **Core Course Sequence**<br>NAF-Principles of IT / NAF-Principles of IT-IC3<br>NAF-Graphic Design / NAF-Web Design<br>NAF-Introduction to Programing / NAF-Computer Networking<br>**Complementary Course(s)**<br>NAF-Computer Systems<br>NAF-Database Design<br>NAF-Digital Video Production | Information Technology Service and Support |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| INFORMATION TECHNOLOGY (CONT.) | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Web Design and Development | **Core Course Sequence**<br>Web Design and Development I<br>Web Design and Development II<br>Web Design and Development III<br>**Complementary Course(s)**<br>Web Design and Development II LAB **<br>Web Design and Development III LAB **<br>Web Design and Development Advanced Studies | Web Design and Development |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

# COURSE DESCRIPTIONS

## ARTS, A/V TECHNOLOGY & COMMUNICATION

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fashion Design and Construction I** | **FASHION CONST I** | **1** | **L1** | **50.0407** |

*Prerequisite: None*

This course is designed to provide students with an understanding of the psychological and social aspects of clothing, and fundamental concepts of fashion, fashion design and construction. Areas of emphasis include fashion, textiles, clothing construction, merchandising, the use and care of sewing equipment and exploration of careers in the fashion industry.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fashion Design and Construction II** | **FASHION CONST II** | **1** | **L2** | **50.0407** |

*Prerequisite: Fashion Design and Construction I*

This course is a continuation of Fashion, Design, and Construction I. This course allows intermediate students to build on fundamental skills developed in Fashion, Design, and Construction I. This course will provide more in-depth experiences with fashion, textiles, design and construction. Areas of emphasis are comprised of design and illustration, performance characteristics of textile components, commercial production processes, and merchandising, marketing and customer service concepts. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fashion Design and Construction III** | **FASHION CONST III** | **1** | **L3C** | **50.0407** |

*Prerequisite: Fashion Design and Construction II*

This course is a continuation of Fashion, Design, and Construction II. This course allows advanced students to develop their knowledge and skills attained in Fashion, Design, and Construction I and II. This course will cover in greater depth design inspiration, vision and skills, professional portfolio development, advanced techniques such as draping, presentation skills, manufacturing, the merchandising-buying process, promotion, as well as legislation, consumer protection, business operations and entrepreneurship. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Fashion Design and Construction Advanced Studies** | **FASHION CONST AS** | **1** | **AS** | **50.0407** |

*Prerequisite: Fashion Design and Construction III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Foundations of Design** | **FOUN DESIGN** | **1** | **L1** | **50.0499** |

*Prerequisite: None*

This course is designed as a foundation for the Fashion, Textiles and Design and Interior Design programs. Students are introduced to the elements and principles of design as used in the fields of fashion and interior design.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design I** | **GRAPHIC DESG I** | **1** | **L1** | **50.0409** |

*Prerequisite: None*

This course is designed to introduce students to the fundamental skills and knowledge needed to create graphic works using industry-standard hardware and software for a variety of purposes and outputs. Areas of study include the understanding of the industry history, terminology, color, design principles, typography and ethical and legal issues related to graphic designs. Emphasis is placed on layout design and the creation and manipulation of graphics.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design II** | **GRAPHIC DESG II** | **1** | **L2** | **50.0409** |

*Prerequisite: Graphic Design I*

This course is a continuation of Graphic Design I. This course provides advanced graphic design students with instruction in advanced techniques and processes. Students will work on projects simulating challenges found in the design industry such as corporate identity, publishing, advertising, and web applications. Students will develop their skills utilizing industry-standard software and equipment. Portfolio development will be emphasized. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design II LAB** | **GRAPHIC DESG II L** | **1** | **L2L** | **50.0409** |

*Prerequisite: Concurrent enrollment in Graphic Design II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design III** | **GRAPHIC DESG III** | **1** | **L3C** | **50.0409** |

*Prerequisite: Graphic Design II*

This course is a continuation of Graphic Design I. This course provides advanced graphic design students with instruction in advanced techniques and processes. Students will work on projects simulating challenges found in the design industry such as corporate identity, publishing, advertising, web applications, and package design. Portfolio development will be emphasized. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design III LAB** | **GRAPHIC DESG III L** | **1** | **L3L** | **50.0409** |

*Prerequisite: Concurrent enrollment in Graphic Design III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Graphic Design Advanced Studies** | **GRAPHIC DESG AS** | **1** | **AS** | **50.0409** |

*Prerequisite: Graphic Design III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design I** | **INT DESIGN I** | **1** | **L1** | **50.0408** |

*Prerequisite: None*

This course provides students with an introduction to residential design. Students learn about the elements and principals of design and how to apply them in the planning of interior spaces. Areas of study include understanding both personal and clients wants and needs, housing options, design styles, architectural styles, introduction to architectural drawings, and career opportunities in the field of interior design.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design II** | **INT DESIGN II** | **1** | **L2** | **50.0408** |

*Prerequisite: Interior Design I*

This course is a continuation of Interior Design I. This course prepares intermediate interior design students for instruction in interior spaces and in determining client interests and developing a design plan. Areas of study include styles and trends in architecture, the basic structure of construction, and residential and commercial interior designs. Students will expand their design knowledge in color, textiles, materials, furnishings, accessories, and completing and presenting design professional presentations. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design II LAB** | **INT DESIGN II L** | **1** | **L2L** | **50.0408** |

*Prerequisite: Concurrent enrollment in Interior Design II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design III** | **INT DESIGN III** | **1** | **L3C** | **50.0408** |

*Prerequisite: Interior Design II*

This course is a continuation of Interior Design II. This course provides advanced interior design students with instruction in advanced techniques and processes, understanding of the elements and principles of design, processes for producing design concepts, and creating visuals and samples for professional presentations. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design III LAB** | **INT DESIGN III L** | **1** | **L3L** | **50.0408** |

*Prerequisite: Concurrent enrollment in Interior Design III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in this program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Interior Design Advanced Studies** | **INT DESIGN AS** | **1** | **AS** | **50.0408** |

*Prerequisite: Interior Design III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Pattern Drafting** | **PAT DRAFTING** | **1** | **L3** | **50.0407** |

*Prerequisite: Fashion Design and Construction II*

This course is designed to provide students with the theory and application of flat pattern drafting and design. Students apply the principles and elements of design to draft patterns and construct garments. Areas of emphasis include sketching, measurements, and pattern alterations. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Photography I** | **PHOTO I** | **1** | **L1** | **50.0406** |

*Prerequisite: None*

This course is designed to introduce students to the fundamentals of commercial photography in relation to seeing photographically, operating cameras, use of light, image capture, and processing digital images. Students will also learn the history of photography, legal and ethical issues related to the industry. Career exploration is also a part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Photography II** | **PHOTO II** | **1** | **L2** | **50.0406** |

*Prerequisite: Photography I*

This course is a continuation of Photography I. This course provides intermediate photography students with instruction in advanced digital techniques and processes. Areas of study include operating cameras, use of light, image capture, and processing digital images. Students will also learn the history of photography, legal and ethical issues related to the industry. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Photography III** | **PHOTO III** | **1** | **L3C** | **50.0406** |

*Prerequisite: Photography II*

This course is a continuation of Photography II. This course provides advanced photography students with instruction in advanced digital techniques and processes in commercial photography. Manipulation of images using industry-standard software is also included. Students will be required to exhibit their projects. Students will be prepared for industry certifications. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Photography Advanced Studies** | **PHOTO AS** | **1** | **AS** | **50.0406** |

*Prerequisite: Photography III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Radio Production I** | **RADIO PROD I** | **1** | **L1** | **10.0202** |

*Prerequisite: None*

This course is designed to introduce students to the basic elements and skills needed for radio broadcast production. Students will learn the basics of broadcast news writing, how to gather and incorporate sound, and basic laws and ethical issues of the industry. Equipment instruction includes operating radio amplifiers, mixers, audio boards, microphones, music CDs, and MP3s. Internet and on-air program production are emphasized. Students will become familiar with radio production techniques used within the broadcast industry.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Radio Production II** | **RADIO PROD II** | **1** | **L2** | **10.0202** |

*Prerequisite: Radio Production I*

This course is a continuation of Radio Production I. Intermediate radio production students will receive instruction in techniques for broadcast news writing, gathering and incorporating sound, and production operations. Emphasis is placed on principles to produce a live broadcast, pre/post-production, editing techniques, studio, and engineering procedures, and production skills. An application of laws and ethics within the broadcast industry is included. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Radio Production III** | **RADIO PROD III** | **1** | **L3C** | **10.0202** |

*Prerequisite: Radio Production II*

This course is a continuation of Radio Production II. This course provides advanced radio production students with instruction in advanced techniques and processes in radio broadcast and production. Emphasis is placed on the practical application of skills to produce live and prerecorded broadcast. Pre/post-production, editing techniques, studio and engineering procedures, and production skills will be utilized and honed. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Radio Production Advanced Studies** | **RADIO PROD AS** | **1** | **AS** | **10.0202** |

*Prerequisite: Radio Production III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Theatre Technology I** | **THEATRE TECH I** | **1** | **L1** | **50.0502** |

*Prerequisite: None*

This course will introduce the student to the craft and technical skills of a theatrical production. Students will be instructed in an overview of the theatre, design process, theater safety, set construction, stage lighting, sound, and various roles in theatre.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Theatre Technology II** | **THEATRE TECH II** | **1** | **L2** | **50.0502** |

*Prerequisite: Theatre Technology I*

This course is a continuation of Theatre Technology I. This course provides intermediate theater technology students with instruction in advanced techniques and processes. Areas of study include lighting, sound, and scenic design, as well as costuming, stage management, and promotion. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Theatre Technology III** | **THEATRE TECH III** | **1** | **L3C** | **50.0502** |

*Prerequisite: Theatre Technology II*

This course is a continuation of Theatre Technology II. This course provides advanced theater design technology students with instruction in advanced techniques and processes. Areas of study include implementation of lighting, sound and scenic design and house management. Exploration of career opportunities in theatre technology is also emphasized. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Theatre Technology Advanced Studies** | **THEATRE TECH AS** | **1** | **AS** | **50.0502** |

*Prerequisite: Theatre Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production I** | **VIDEO PROD I** | **1** | **L1** | **50.0602** |

*Prerequisite: None*

This course is designed to introduce students to the basic elements and skills needed to produce a video. Operating video cameras, script writing, editing equipment, microphones, and the process of On-Air program production are emphasized. Students will become familiar with video production techniques for a variety of purposes, including broadcast journalism.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production II** | **VIDEO PROD II** | **1** | **L2** | **50.0602** |

*Prerequisite: Video Production I*

This course is a continuation of Video Production I. This course provides intermediate video production students with instruction in advanced techniques and processes. Emphasis is placed on the advanced principles in pre/post-production, editing techniques, studio and engineering procedures, and live broadcast skills. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production II LAB** | **VIDEO PROD II L** | **1** | **L2L** | **50.0602** |

*Prerequisite: Concurrent enrollment in Video Production II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production III** | **VIDEO PROD III** | **1** | **L3C** | **50.0602** |

*Prerequisite: Video Production II*

This course is a continuation of Video Production II. This course provides advanced video production students with instruction in advanced techniques and processes. Emphasis is placed on the advanced principles in pre/post-production, editing techniques, studio and engineering procedures, and live broadcast skills. Students will become familiar with video production techniques for a variety of purposes, including broadcast journalism. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production III LAB** | **VIDEO PROD III L** | **1** | **L3L** | **50.0602** |

*Prerequisite: Concurrent enrollment in Video Production III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Video Production Advanced Studies** | **VIDEO PROD AS** | **1** | **AS** | **50.0602** |

*Prerequisite: Video Production III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Arts A/V Technology and Communication** | **WORK EXPER TECH** | **1** | **WK** | **99.0003** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## INFORMATION TECHNOLOGY

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation I** | **ANIMATE I** | **1** | **L1** | **10.0304** |

*Prerequisite: None*

This course introduces students to the basic principles of two and three-dimensional computer animation and graphics. Areas of study include storyboarding, character creation, background development, traditional animation techniques, and the use of industry-standard technology. Projects are provided to develop the student's career-based animation skills.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation II** | **ANIMATE II** | **1** | **L2** | **10.0304** |

*Prerequisite: Animation I*

This course is a continuation of Animation I. This course provides students further instruction in principles of two and three-dimensional computer animation and graphics. Areas of study include storyboarding, character creation, modeling, background development, and traditional animation techniques. Projects are provided to develop the student's career-based animation skills. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation II LAB** | **ANIMATE II L** | **1** | **L2L** | **10.0304** |

*Prerequisite: Concurrent enrollment in Animation II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation III** | **ANIMATE III** | **1** | **L3C** | **10.0304** |

*Prerequisite: Animation II*

This course is a continuation of Animation II. This course provides students advanced instruction in principles of two and three-dimensional computer animation and graphics. Areas of study include storyboarding, character creation, modeling, background development, and traditional animation techniques. Projects are provided to develop the student's career-based animation skills. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation III LAB** | **ANIMATE III L** | **1** | **L3L** | **10.0304** |

*Prerequisite: Concurrent enrollment in Animation III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Animation Advanced Studies** | **ANIMATE AS** | **1** | **AS** | **10.0304** |

*Prerequisite: Animation III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **AP Computer Science A** | **AP COMPUTER SCI A** | **1** | **L3C** | **11.0701** |

*Prerequisite: Computer Science II*

This course is a continuation of Computer Science II. This course follows The College Board Advanced Placement curriculum and prepares students for the AP Computer Science exam. The course provides advanced computer science students with instruction in advanced programming, techniques and processes. The students will continue to develop all skills learned in Computer Science I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science I** | **COMPUTER SCI I** | **1** | **L1** | **11.0701** |

*Prerequisite: None*

This course is designed to introduce students to programming and the role of the computer in society. The areas of major emphasis in the course will be on object-oriented programming methodology, algorithms, data structures and ethics. Topics will include program design, program implementation, standard data structures, standard algorithms and an introduction to C++ language.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science II** | **COMPUTER SCI II** | **1** | **L2** | **11.0701** |

*Prerequisite: Computer Science I*

This course is a continuation of Computer Science I. This course provides intermediate computer science students with instruction in advanced techniques and processes, particularly as it relates to the language of C++. The areas of major emphasis in the course will be on object-oriented programming methodology, algorithms, data structures and ethics. Topics will include program design, program implementation, standard data structures, and standard algorithms. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science II LAB** | **COMPUTER SCI II L** | **1** | **L2L** | **11.0701** |

*Prerequisite: Concurrent enrollment in Computer Science II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science III** | **COMPUTER SCI III** | **1** | **L3C** | **11.0701** |

*Prerequisite: Computer Science II*

This course is a continuation of Computer Science II. This course provides advanced computer science students with instruction in advanced programming, techniques and processes, with an emphasis in the language of Java. The students will continue to develop all skills learned in Computer Science I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science III LAB** | **COMPUTER SCI III L** | **1** | **L3L** | **11.0701** |

*Prerequisite: Concurrent enrollment in Computer Science III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Computer Science Advanced Studies** | **COMPUTER SCI AS** | **1** | **AS** | **11.0701** |

*Prerequisite: Computer Science III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development I** | **DIG GAME DEV I** | **1** | **L1** | **50.0411** |

*Prerequisite: None*

This course is designed to introduce students to the elements and structure of game programming and design. The areas of major emphasis in the course are game methodology, programming, game genres, game theory, 2D and 3D interactive experiences, and immersive environments. Students will apply both creative and technical skills to design and refine in addition to implementing the adventure. The appropriate use of technology is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development II** | **DIG GAME DEV II** | **1** | **L2** | **50.0411** |

*Prerequisite: Digital Game Development I*

This course is a continuation of Digital Game Development I. This course provides intermediate digital game development students with instruction in advanced techniques and processes. The major areas of emphasis in the course will be development of characters, immersive environments, different genres and exploration of multi-player games. Students will apply both creative and technical skills to design and refine in addition to implementing the adventure. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development II LAB** | **DIG GAME DEV II L** | **1** | **L2L** | **50.0411** |

*Prerequisite: Concurrent enrollment in Digital Game Development II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development III** | **DIG GAME DEV III** | **1** | **L3C** | **50.0411** |

*Prerequisite: Digital Game Development II*

This course is a continuation of Digital Game Development II. This course provides advanced digital game development students with instruction in advanced techniques and production processes, various pay models and considerations to market a game. Emphasis is placed on students developing digital games that include intermediate and advanced concepts in design, programming, animation, and 3-D techniques. Project-based learning, collaboration, and portfolio development are essential elements of this course. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development III LAB** | **DIG GAME DEV III L** | **1** | **L3L** | **50.0411** |

*Prerequisite: Concurrent enrollment in Digital Game Development III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Digital Game Development Advanced Studies** | **DIG GAME DEV AS** | **1** | **AS** | **50.0411** |

*Prerequisite: Digital Game Development III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Essentials I** | **IT ESST I** | **1** | **L1** | **15.1202** |

*Prerequisite: None*

This course covers the fundamentals of computer hardware and software, as well as topics in design, maintenance, and repair. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. This course prepares students for industry certification such as CompTIA's A+.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Essentials II** | **IT ESST II** | **1** | **L2C** | **15.1202** |

*Prerequisite: IT Essentials I*

This course covers the fundamentals of computer hardware and software, as well as topics in design, maintenance, and repair. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. This course prepares students for industry certification such as CompTIA's A+. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Essentials Advanced Studies** | **IT ESST AS** | **1** | **AS** | **15.1202** |

*Prerequisite: IT Essentials II*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Networking I** | **IT NETWRKG I** | **1** | **L1** | **11.1002** |

*Prerequisite: None*

This course will introduce students to the general theories needed to design, build, and maintain home and small business networks. Concepts learned will provide the students with the opportunity to further their education in Information Technology (IT) and prepare for entry-level IT careers.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Networking II** | **IT NETWRKG II** | **1** | **L2** | **11.1002** |

*Prerequisite: IT Networking I*

This course is a continuation of IT Networking I. This course provides intermediate students with the general theory of distance vector routing protocols and skills required for advanced router configuration, including interfaces, Routing Information Protocol (RIP) and Enhanced Interior Gateway Routing Protocol (EIGRP). Concepts learned will provide the students with the opportunity to further their education in Information Technology (IT) and prepare for entry-level IT careers. Upon completion of this sequence of courses, students may qualify to sit for a national industry-standard certification exam.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Networking III** | **IT NETWRKG III** | **1** | **L3C** | **11.1002** |

*Prerequisite: IT Networking II*

This course is a continuation of IT Networking II. This course provides intermediate students with the general theory of switching and intermediate routing, including virtual local-area networks (VLAN), interVLAN routing, wireless local area networks (LAN), and network troubleshooting. Concepts learned will provide the students with the opportunity to further their education in Information Technology (IT) and prepare for entry-level IT careers. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **IT Networking Advanced Studies** | **IT NETWRKG AS** | **1** | **AS** | **11.1002** |

*Prerequisite: IT Networking III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Computer Networking** | **NAF COMP NETWORK** | **.5** | **L3C** | **11.1002** |

*Prerequisite: Must complete one or more Level 3 (L3) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Computer Networking is a hands-on introduction to peer-to-peer and client/server networks. The course guides students through all phases of implementing and troubleshooting common TCP/IP Ethernet networks. It covers network components, cables, and connectors, as well as the OSI model, protocols, and topologies. Students implement and troubleshoot a LAN and learn about access issues for WANs. Finally, students explore opportunities for network-related careers.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Computer Systems** | **NAF COMP SYSTEMS** | **.5** | **L3** | **11.0701** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Computer Systems walks students through the intricacies of setting up hardware, installing software, connecting to a network, and connecting to the Internet. Students get hands-on practice upgrading operating systems. They get practice assembling and disassembling computer hardware including peripherals, motherboards, FRUs, and connectors. Students also learn troubleshooting techniques. Finally, students get a chance to explore careers for computer systems professionals.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Database Design** | **NAF DBASE DESG** | **.5** | **L3** | **11.0802** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Database Design covers all aspects of the database life cycle, from collecting user requirements to delivering a database application. Students get hands-on practice in a true-to-life database project as they move from a statement of requirements to a conceptual model, then to an entity-relationship model. They translate this into a relational database. Finally, they create, test, and document the associated database application. Students also examine career opportunities as database professionals.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Digital Video Production** | **NAF DIG VIDEO PROD** | **.5** | **L2** | **50.0602** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Digital Video Production provides a hands-on introduction to digital video production. It guides students through all phases of digital video production, from planning, executing, and managing a video shoot to editing footage. Students explore methods of sharing and broadcasting digital videos, including platform versions, CDs/DVDs, and web delivery. They also learn about publicizing a digital video, using techniques such as search engines to direct viewers to the production.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Graphic Design** | **NAF GRAPHIC DESIGN** | **.5** | **L2** | **50.0409** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Graphic Design provides a hands-on introduction to the technical and creative skills of a professional graphic designer. First students learn the distinguishing features of communicating visually through graphic design. Next, they gain technical skills in Adobe Photoshop to equip them for graphic design work. From there, students master the basic principles of graphic design, and then delve into the elements of graphic design, such as color, typography, and images.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Introduction to Programming** | **NAF INTRO PROG** | **.5** | **L3** | **11.0201** |

*Prerequisite: Must complete two or more Level 2 (L2) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Introduction to Programming uses Python as a basis for learning general programming skills. Students learn programming principles by comparing Python to other programming languages. They use models as a way to quickly solve new problems using knowledge and techniques already learned. Students complete over 60 programs in the course, including both text and graphics/animation programs. In addition to programming, students learn program design, documentation, formal debugging, and testing. Finally, students examine career opportunities in programming.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Principles of Information Technology** | **NAF PRIN IT** | **.5** | **L1** | **15.1201** |

*Prerequisite: None*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

This is the first course students take in the Academy of Information Technology. It provides an overview of information technology and introduces students to the basics of hardware and software. Students examine hardware components including peripherals, connectors, and memory. Students explore common operating systems, software applications, and programming languages. Students learn about types of networks and network topology, and they set up an email client/server connection.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Principles of Information Technology IC3** | **NAF PRIN IT IC3** | **.5** | **L1** | **15.1201** |

*Prerequisite: NAF-Principles of Information Technology*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

The $IC^3$ Certification Extension is a second-semester extension to the NAF course Principles of Information Technology. The purpose of this course extension is to prepare students to pass the $IC^3$ Certification exam. It is geared to the Global Standard 3 (August, 2009) version of the $IC^3$ exam, which includes Computing Fundamentals, Key Applications, and Living Online. This course extension assumes that students have successfully completed Principles of Information Technology.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **NAF-Web Design** | **NAF WEB DESG** | **.5** | **L2** | **11.0801** |

*Prerequisite: Must complete one or more Level 1 (L1) NAF courses*

***Schools must be affiliated with the National Academy Foundation™ program to offer this course****

Web Design is a hands-on introduction to designing, building, and launching Web sites. Students learn about Web development including HTML coding, usability, design, and Web-based publishing tools. Students determine business requirements, gather Web content, create Web pages, conduct usability testing, launch their Web sites, and plan how to attract traffic. Finally, students take a look at various career opportunities in Web design.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development I** | **WEB DESG DEV I** | **1** | **L1** | **11.0801** |

*Prerequisite: None*

This course is designed to introduce students to the basic elements of web design and development. Students will learn about content placement, use of color and graphics, typography and message using industry-standard software. Students are introduced to various web design languages, design concepts, and layout theory. Students will become familiar with marketing and other uses of websites; as well as ethical and legal issues related to websites.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development II** | **WEB DESG DEV II** | **1** | **L2** | **11.0801** |

*Prerequisite: Web Design and Development I*

This course is a continuation of Web Design and Development I. This course is designed for intermediate students to create websites for a variety of purposes. Students will develop their knowledge of content, placement, use of color and graphics, typography and message. Students will use various web design languages, design concepts, and layout theories to create their websites. Students will examine the role of marketing, market research, ethics and legal issues as it relates to websites. Project-based learning, collaboration, and portfolio development are essential elements of this class. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development II LAB** | **WEB DESG DEV II L** | **1** | **L2L** | **11.0801** |

*Prerequisite: Concurrent enrollment in Web Design and Development II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development III** | **WEB DESG DEV III** | **1** | **L3C** | **11.0801** |

*Prerequisite: Web Design and Development II*

This course is a continuation of Web Design and Development II. This course is designed for advanced students to create websites for a variety of purposes using advanced techniques and processes. Areas of study include automation, animation and interactivity in websites, as well as, web servers and a more extensive knowledge of website construction. Project-based learning, collaboration, and portfolio development are essential elements of this class. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development III LAB** | **WEB DESG DEV III L** | **1** | **L3L** | **11.0801** |

*Prerequisite: Concurrent enrollment in Web Design and Development III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Web Design and Development Advanced Studies** | **WEB DESG DEV AS** | **1** | **AS** | **11.0801** |

*Prerequisite: Web Design and Development III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Information Technology** | **WORK EXPER IT** | **1** | **WK** | **99.0011** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

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# SKILLED

# &

# TECHNICAL SCIENCES

## CAREER CLUSTERS & PROGRAM ALIGNMENT

### *Architecture & Construction*

- Architectural Design
- Construction Technology
- Drafting & Design
- Furniture & Cabinetmaking
- Heating, Ventilation, Air Conditioning & Refrigeration

### *Manufacturing*

- Electronic Technology
- Machine Tool Technology
- Manufacturing Technologies
- Mechanical Technology
- Metalworking
- Welding Technology

### *Science, Technology, Engineering, & Mathematics*

- Energy Technologies
- Aerospace Engineering
- Architectural & Civil Engineering
- Environmental Engineering
- Electrical Engineering
- Mechanical Engineering

### *Transportation, Distribution & Logistics*

- Automotive Service Technician
- Automotive Technology
- Aviation Maintenance Technician
- Aviation Technology
- Collision Repair Technology
- Diesel Technology

# PROGRAM COURSE SEQUENCES

## SKILLED & TECHNICAL SCIENCES

### ARCHITECTURE & CONSTRUCTION

| Program Name | Course Sequence | State Skill Standards* |
|---|---|---|
| Architectural Design | **Core Course Sequence**<br>Architectural Design I<br>Architectural Design II<br>Architectural Design III<br>**Complementary Course(s)**<br>Architectural Design II LAB<br>Architectural Design III LAB<br>Architectural Design Advanced Studies | Architectural Design<br>*TBD* |
| Construction Technology | **Core Course Sequence**<br>Construction Technology I<br>Construction Technology II<br>Construction Technology III<br>**Complementary Course(s)**<br>Construction Technology II LAB **<br>Construction Technology III LAB **<br>Construction Technology Advanced Studies | Construction Technology |
| Drafting and Design | **Core Course Sequence**<br>Drafting and Design I<br>Drafting and Design II<br>Drafting and Design III<br>**Complementary Course(s)**<br>Drafting and Design II LAB **<br>Drafting and Design III LAB **<br>Drafting and Design Advanced Studies | Drafting and Design |
| Furniture and Cabinetmaking | **Core Course Sequence**<br>Furniture and Cabinetmaking I<br>Furniture and Cabinetmaking II<br>Furniture and Cabinetmaking III<br>**Complementary Course(s)**<br>Furniture and Cabinetmaking Advanced Studies | Furniture and Cabinetmaking |
| Heating, Ventilation, Air Conditioning & Refrigeration | **Core Course Sequence**<br>Air Conditioning and Refrigeration I<br>Air Conditioning and Refrigeration II<br>Air Conditioning and Refrigeration III<br>**Complementary Course(s)**<br>Air Conditioning and Refrigeration Advanced Studies | Heating, Ventilation, Air Conditioning & Refrigeration |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| MANUFACTURING | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Electronic Technology | **Core Course Sequence**<br>Electronic Technology I<br>Electronic Technology II<br>Electronic Technology III<br>**Complementary Course(s)**<br>Electronic Technology II LAB **<br>Electronic Technology III LAB **<br>Electronic Technology Advanced Studies | Electronic Technology |
| Machine Tool Technology | **Core Course Sequence**<br>Machine Tool Technology I<br>Machine Tool Technology II<br>Machine Tool Technology III<br>**Complementary Course(s)**<br>Machine Tool Technology II LAB **<br>Machine Tool Technology III LAB **<br>Machine Tool Technology Advanced Studies | Machine Tool Technology<br>*TBD* |
| Manufacturing Technologies | **Core Course Sequence**<br>Manufacturing Technologies I<br>Manufacturing Technologies II<br>Manufacturing Technologies III<br>**Complementary Course(s)**<br>Manufacturing Technologies II LAB **<br>Manufacturing Technologies III LAB **<br>Manufacturing Technologies Advanced Studies | Manufacturing Technologies<br>*TBD* |
| Mechanical Technology | **Core Course Sequence**<br>Mechanical Technology I<br>Mechanical Technology II<br>Mechanical Technology III<br>**Complementary Course(s)**<br>Mechanical Technology II LAB **<br>Mechanical Technology III LAB **<br>Mechanical Technology Advanced Studies | Mechanical Technology |
| Metalworking | **Core Course Sequence**<br>Metalworking I<br>Metalworking II<br>Metalworking III<br>**Complementary Course(s)**<br>Metalworking Advanced Studies | Metalworking |
| Welding Technology | **Core Course Sequence**<br>Welding Technology I<br>Welding Technology II<br>Welding Technology III<br>**Complementary Course(s)**<br>Welding Technology II LAB **<br>Welding Technology III LAB **<br>Welding Technology Advanced Studies | Welding Technology |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Energy Technologies | **Core Course Sequence**<br>Energy Technologies I<br>Energy Technologies II<br>Energy Technologies III<br>**Complementary Course(s)**<br>Energy Technologies Advanced Studies | Energy Technologies |
| Engineering:<br>(Aerospace) | **Core Course Sequence**<br>Aerospace Engineering I<br>Aerospace Engineering II<br>Aerospace Engineering III<br>**Complementary Course(s)**<br>Aerospace Engineering Advanced Studies<br>**Project Lead The Way™ (PLTW):Pathway to Engineering**<br>PLTW-Introduction to Engineering<br>PLTW-Principles of Engineering<br>PLTW-Aerospace Engineering<br>**Complementary Course(s)**<br>PLTW-Engineering Design and Development | Aerospace<br>Engineering |
| Engineering:<br>(Architectural & Civil) | **Project Lead The Way™ (PLTW):Pathway to Engineering**<br>PLTW-Introduction to Engineering<br>PLTW-Principles of Engineering<br>PLTW-Civil Engineering and Architecture<br>**Complementary Course(s)**<br>PLTW-Engineering Design and Development | Architectural &<br>Civil Engineering |
| Engineering:<br>(Electrical) | **Project Lead The Way™ (PLTW):Pathway to Engineering**<br>PLTW-Introduction to Engineering<br>PLTW-Principles of Engineering<br>PLTW-Digital Electronics<br>**Complementary Course(s)**<br>PLTW-Engineering Design and Development | Electrical<br>Engineering |
| Engineering:<br>(Environmental) | **Project Lead The Way™ (PLTW):Pathway to Engineering**<br>PLTW-Introduction to Engineering<br>PLTW-Principles of Engineering<br>PLTW-Environmental Sustainability<br>**Complementary Course(s)**<br>PLTW-Engineering Design and Development | Environmental<br>Engineering<br>*TBD* |
| Engineering:<br>(Mechanical) | **Project Lead The Way™ (PLTW):Pathway to Engineering**<br>PLTW-Introduction to Engineering<br>PLTW-Principles of Engineering<br>PLTW-Computer Integrated Manufacturing<br>**Complementary Course(s)**<br>PLTW-Engineering Design and Development | Mechanical<br>Engineering |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

| TRANSPORTATION, DISTRIBUTION & LOGISTICS | | |
|---|---|---|
| **Program Name** | **Course Sequence** | **State Skill Standards*** |
| Automotive Service Technician | **Core Course Sequence**<br>Automotive Service Technician I<br>Automotive Service Technician II<br>Automotive Service Technician III<br>Automotive Service Technician IV<br>**Complementary Course(s)**<br>Automotive Service Technician II LAB **<br>Automotive Service Technician III LAB **<br>Automotive Service Technician IV LAB ** | Automotive Service Technician |
| Automotive Technology | **Core Course Sequence**<br>Automotive Technology I<br>Automotive Technology II<br>Automotive Technology III<br>**Complementary Course(s)**<br>Automotive Technology II LAB<br>Automotive Technology III LAB<br>Automotive Technology Advanced Studies | Automotive Technology |
| Aviation Maintenance Technician | **Core Course Sequence**<br>Aviation Maintenance Technician I<br>Aviation Maintenance Technician II<br>Aviation Maintenance Technician III<br>**Complementary Course(s)**<br>Aviation Maintenance Technician Advanced Studies | Aviation Maintenance Technician<br>*TBD* |
| Aviation Technology | **Core Course Sequence**<br>Aviation Technology I<br>Aviation Technology II<br>Aviation Technology III<br>**Complementary Course(s)**<br>Aviation Technology Advanced Studies | Aviation Technology<br>*TBD* |
| Collision Repair Technology | **Core Course Sequence**<br>Collision Repair Technology I<br>Collision Repair Technology II<br>Collision Repair Technology III<br>**Complementary Course(s)**<br>Collision Repair Technology II LAB **<br>Collision Repair Technology III LAB **<br>Collision Repair Technology Advanced Studies | Collision Repair Technology |
| Diesel Technology | **Core Course Sequence**<br>Diesel Technology I<br>Diesel Technology II<br>Diesel Technology III<br>**Complementary Course(s)**<br>Diesel Technology II LAB **<br>Diesel Technology III LAB **<br>Diesel Technology Advanced Studies | Diesel Technology |

* The Employability Skills for Career Readiness Standards must be an integrated component of all CTE course sequences.

** Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) – see individual course descriptions for requirements and prerequisites.

# COURSE DESCRIPTIONS

## ARCHITECTURE & CONSTRUCTION

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Air Conditioning and Refrigeration I** | **HVACR I** | **1** | **L1** | **47.0201** |

*Prerequisite: None*

This course will introduce students to the basic operation of air conditioning principles and practices. Applications include principles of an effective employee, industrial safety standards, thermodynamics, psychometrics, piping techniques, control systems, cooling system service, and electric heat systems.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Air Conditioning and Refrigeration II** | **HVACR II** | **1** | **L2** | **47.0201** |

*Prerequisite: Air Conditioning and Refrigeration I*

This course is a continuation of Air Conditioning and Refrigeration I. This course focuses intermediate air conditioning and refrigeration students on servicing air handling systems, heat pumps, gas heat systems, commercial refrigeration systems, and icemakers. Instruction is provided in system installation, troubleshooting techniques, calculation of heat loss/gain, ductwork size and design, air balance, and pneumatic controls. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Air Conditioning and Refrigeration III** | **HVACR III** | **1** | **L3C** | **47.0201** |

*Prerequisite: Air Conditioning and Refrigeration II*

This course is a continuation of Air Conditioning and Refrigeration II. This course provides advanced air conditioning and refrigeration students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Air Conditioning and Refrigeration I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Air Conditioning and Refrigeration Advanced Studies** | **HVACR AS** | **1** | **AS** | **47.0201** |

*Prerequisite: Air Conditioning and Refrigeration III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design I** | **ARCH DESG I** | **1** | **L1** | **04.0901** |

*Prerequisite: None*

This course provides Architectural Design students with the basic principles of architectural design and introductory civil engineering skills. This course also provides a basic understanding of current building codes, basic building construction methods, building materials, and architectural drafting information and methods. Project based activities are provided to develop the student's architectural CADD and civil engineering skills. The appropriate use of technology is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design II** | **ARCH DESG II** | **1** | **L2** | **04.0901** |

*Prerequisite: Architectural Design I*

This course is a continuation of Architectural Design I. This course provides intermediate Architectural Design students with advanced principles of architectural design and civil engineering skills. Areas of emphasis include building codes, building construction methods, building materials, site analysis, and construction documentation. Advanced project based activities provide the students the opportunity to develop their architectural design skills. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design II LAB** | **ARCH DESG II L** | **1** | **L2L** | **04.0901** |

*Prerequisite: Concurrent enrollment in Architectural Design II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design III** | **ARCH DESG III** | **1** | **L3C** | **04.0901** |

*Prerequisite: Architectural Design II*

This course is a continuation of Architectural Design II. This course provides advanced Architectural Design students with instruction in advanced techniques and processes. Students will apply the skills learned in Architectural Design I and II to complete advanced design tasks. Students will complete project based activities to compare residential and commercial architectural methodology. Applicable Building Information Modeling and Geographic Information System technologies will be introduced. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design III LAB** | **ARCH DESG III L** | **1** | **L3L** | **04.0901** |

*Prerequisite: Concurrent enrollment in Architectural Design III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Architectural Design Advanced Studies** | **ARCH DESG AS** | **1** | **AS** | **04.0901** |

*Prerequisite: Architectural Design III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology I** | **CONST TECH I** | **1** | **L1** | **46.0000** |

*Prerequisite: None*

This course will introduce students to the world of construction. Through a hands-on approach, each student will develop basic understanding in the areas of construction: safety, blueprint reading, framing, site layout techniques, floor systems, and wall systems. Practical application of safe work habits and the correct use of tools and equipment will be emphasized throughout this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology II** | **CONST TECH II** | **1** | **L2** | **46.0000** |

*Prerequisite: Construction Technology I*

This course is a continuation of Construction Technology I. This course provides intermediate construction students with knowledge and skills in material handling, surveying, site development, concrete, masonry, roof systems, and electrical systems. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology II LAB** | **CONST TECH II L** | **1** | **L2L** | **46.0000** |

*Prerequisite: Concurrent enrollment in Construction Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology III** | **CONST TECH III** | **1** | **L3C** | **46.0000** |

*Prerequisite: Construction Technology II*

This course is a continuation of Construction Technology II. This course provides advanced construction students with knowledge and skills in plumbing, stair layout, HVAC, and exterior applications. Through hands-on projects, students develop technical skills that are used throughout the construction industry. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology III LAB** | **CONST TECH III L** | **1** | **L3L** | **46.0000** |

*Prerequisite: Concurrent enrollment in Construction Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Construction Technology Advanced Studies** | **CONST TECH AS** | **1** | **AS** | **46.0000** |

*Prerequisite: Construction Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design I** | **CADD I** | **1** | **L1** | **15.1302** |

*Prerequisite: None*

This course introduces the student to the fundamentals of mechanical and architectural drawing. This course provides students with the knowledge and practice required to produce and analyze multi-view drawings, pictorial drawings, and dimensioning. Students will gain experience using both sketching techniques and computer assisted drafting programs. Various career opportunities and areas for postsecondary study will be explored.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design II** | **CADD II** | **1** | **L2** | **15.1302** |

*Prerequisite: Drafting and Design I*

This course is a continuation of Drafting and Design I. This course provides intermediate CADD (Computer-Aided Drafting and Design) students with advanced techniques and processes related to the various drafting and design industries. Areas of study include the development of advance CADD and sketching skills, plotting, scaling, auxiliary views, intersections, problem solving, critiquing, and team building. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design II LAB** | **CADD II L** | **1** | **L2L** | **15.1302** |

*Prerequisite: Concurrent enrollment in Drafting and Design II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design III** | **CADD III** | **1** | **L3C** | **15.1302** |

*Prerequisite: Drafting and Design II*

This course is a continuation of Drafting and Design II. This course provides advanced CADD (Computer-Aided Drafting and Design) students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Drafting and Design I and II. Areas of study include both mechanical and architectural drafting and design concepts. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design III LAB** | **CADD III L** | **1** | **L3L** | **15.1302** |

*Prerequisite: Concurrent enrollment in Drafting and Design III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Drafting and Design Advanced Studies** | **CADD AS** | **1** | **AS** | **15.1302** |

*Prerequisite: Drafting and Design III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Furniture and Cabinetmaking I** | **FURN CABINET I** | **1** | **L1** | **48.0702** |

*Prerequisite: None*

This course will introduce the beginning furniture and cabinetmaking student to the various stages of construction and assembly of wood products and related materials. This course is intended to provide students with the basic knowledge and skills necessary to design, construct, and finish furniture and/or cabinets in the woodworking industry. Through the course activities the student will gain an understanding of safety procedures, machine operation, and industrial applications.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Furniture and Cabinetmaking II** | **FURN CABINET II** | **1** | **L2** | **48.0702** |

*Prerequisite: Furniture and Cabinetmaking I*

This course is a continuation of Furniture and Cabinetmaking I. This course provides intermediate furniture and cabinetmaking student with the necessary knowledge and skills to pursue employment in related industries. This course will increase knowledge gained in Furniture and Cabinetmaking I. Laboratory activities will include advanced processes using tools and equipment currently being used by the industry. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Furniture and Cabinetmaking III** | **FURN CABINET III** | **1** | **L3C** | **48.0702** |

*Prerequisite: Furniture and Cabinetmaking II*

This course is a continuation of Furniture and Cabinetmaking II. This course provides advanced furniture and cabinetmaking students with knowledge and skills in finish carpentry and cabinetmaking for construction applications. Through hands-on projects, students develop technical skills that are used throughout the construction industry including the software and hardware components of computer numerical-controlled (CNC) equipment. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Furniture and Cabinetmaking Advanced Studies** | **FURN CABINET AS** | **1** | **AS** | **48.0702** |

*Prerequisite: Furniture and Cabinetmaking III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Architecture and Construction** | **WORK EXPER CONST** | **1** | **WK** | **99.0002** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## MANUFACTURING

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology I** | **ELEC TECH I** | **1** | **L1** | **47.0105** |

*Prerequisite: None*

This course introduces the student to electronic practices and fundamentals, roles of electronics in communications and industry, and career development. Topics include safety, tools, basic direct current (DC), alternating current (AC), schematics, soldering, measuring electricity, Ohm's/Watt's/Kirchhoff's Laws, semiconductors, electronic circuits, and digital theory.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology II** | **ELEC TECH II** | **1** | **L2** | **47.0105** |

*Prerequisite: Electronic Technology I*

This course is a continuation of Electronic Technology I. This course introduces intermediate students to advanced practices, principles, special equipment and materials. Students will develop their knowledge and skills learned in Electronic Technology I. Topics include safety, inductive/capacitive/RCL circuits, semiconductor devices, rectifier/filter circuits, discrete devices and such skills necessary to obtain meaningful employment in the electronics industry. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology II LAB** | **ELEC TECH II L** | **1** | **L2L** | **47.0105** |

*Prerequisite: Concurrent enrollment in Electronic Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology III** | **ELEC TECH III** | **1** | **L3C** | **47.0105** |

*Prerequisite: Electronic Technology II*

This course is a continuation of Electronic Technology II. This course provides advanced electronics students with instruction in advanced techniques and processes. They will continue to develop all skills learned in Electronic Technology I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology III LAB** | **ELEC TECH III L** | **1** | **L3L** | **47.0105** |

*Prerequisite: Concurrent enrollment in Electronic Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Electronic Technology Advanced Studies** | **ELEC TECH AS** | **1** | **AS** | **47.0105** |

*Prerequisite: Electronic Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology I** | **MACHINE TOOL I** | **1** | **L1** | **48.0501** |

*Prerequisite: None*

This course introduces students to the basic skills and machines needed in precision metal work. Students gain machining skills while working with lathes, milling machines, surface grinders, drill presses, and other equipment. In addition, students learn the basics of blueprint reading, precision measuring, layout, and machining process planning.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology II** | **MACHINE TOOL II** | **1** | **L2** | **48.0501** |

*Prerequisite: Machine Tool Technology I*

This course is a continuation of Machine Tool Technology I. This course provides intermediate machine tool technology students the ability to further their skills and knowledge levels. Areas of study include computer-aided manufacturing, inspection techniques, metallurgy and quality controls. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology II LAB** | **MACHINE TOOL II L** | **1** | **L2L** | **48.0501** |

*Prerequisite: Concurrent enrollment in Machine Tool Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology III** | **MACHINE TOOL III** | **1** | **L3C** | **48.0501** |

*Prerequisite: Machine Tool Technology II*

This course is a continuation of Machine Tool Technology II. This course provides advanced machine tool technology students with more in-depth skill development. Students will explore the use of computer and numerical controlled machining. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology III LAB** | **MACHINE TOOL III L** | **1** | **L3L** | **48.0501** |

*Prerequisite: Concurrent enrollment in Machine Tool Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Machine Tool Technology Advanced Studies** | **MACHINE TOOL AS** | **1** | **AS** | **48.0501** |

*Prerequisite: Machine Tool Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies I** | **MANUF TECH I** | **1** | **L1** | **15.0613** |

*Prerequisite: None*

This course introduces students to the fundamentals of manufacturing technologies. Areas of emphasis include lab safety, print reading, measuring techniques, 3D modeling, basic electricity and material science. Students will gain experience in technical processes associated with metal, wood and composites.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies II** | **MANUF TECH II** | **1** | **L2** | **15.0613** |

*Prerequisite: Manufacturing Technologies I*

This course is a continuation of Manufacturing Technologies I. This course provides intermediate manufacturing technologies students the ability to further their skills and knowledge levels. Areas of emphasis include print reading, mechatronics, automation, fabrication, and various manufacturing power systems. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies II LAB** | **MANUF TECH II L** | **1** | **L2L** | **15.0613** |

*Prerequisite: Concurrent enrollment in Manufacturing Technologies II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies III** | **MANUF TECH III** | **1** | **L3C** | **15.0613** |

*Prerequisite: Manufacturing Technologies III*

This course is a continuation of Manufacturing Technologies II. This course provides advanced manufacturing technologies students the ability to further their skills and knowledge levels. Areas of emphasis include product development, marketing, quality control, financial record keeping, and diagnostic/troubleshooting practices. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies III LAB** | **MANUF TECH III L** | **1** | **L3L** | **15.0613** |

*Prerequisite: Concurrent enrollment in Manufacturing Technologies II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Manufacturing Technologies Advanced Studies** | **MANUF TECH AS** | **1** | **AS** | **15.0613** |

*Prerequisite: Manufacturing Technologies III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology I** | **MECH TECH I** | **1** | **L1** | **47.0303** |

*Prerequisite: None*

This course introduces students to the operation and maintenance of various mechanical, electrical, and fluid power systems. Content includes general skills in the use of tools, safety, equipment, materials, and problem solving. Fundamental skills such as the proper use of fasteners, safety practices, precision measuring tools, and electrical test equipment will be mastered.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology II** | **MECH TECH II** | **1** | **L2** | **47.0303** |

*Prerequisite: Mechanical Technology I*

This course is a continuation of Mechanical Technology I. This course provides intermediate mechanical technology students opportunities to explore the various forms of power application mechanisms. Areas of emphasis include robotics, hydraulics, pneumatics, electrical, mechanical, and other systems of power transmission. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology II LAB** | **MECH TECH II L** | **1** | **L2L** | **47.0303** |

*Prerequisite: Concurrent enrollment in Mechanical Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology III** | **MECH TECH III** | **1** | **L3C** | **47.0303** |

*Prerequisite: Mechanical Technology II*

This course is a continuation of Mechanical Technology II. This course provides advanced mechanical technology students with instruction in advanced techniques and processes. Areas of emphasis include assembling, operating, and maintaining various electrical motor controllers, mechanical power transmission systems, and high pressure fluid power systems. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology III LAB** | **MECH TECH III L** | **1** | **L3L** | **47.0303** |

*Prerequisite: Concurrent enrollment in Mechanical Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Mechanical Technology Advanced Studies** | **MECH TECH AS** | **1** | **AS** | **47.0303** |

*Prerequisite: Mechanical Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Metalworking I** | **METALWRKG I** | **1** | **L1** | **48.0511** |

*Prerequisite: None*

This course introduces students to a general overview of metalworking processes. Students will gain an understanding of equipment, tools, safety procedures, machine operation, metal-fabricating methods, industrial applications, and problem solving. Students will be introduced to career opportunities and necessary job skills.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Metalworking II** | **METALWRKG II** | **1** | **L2** | **48.0511** |

*Prerequisite: Metalworking I*

This course is a continuation of Metalworking I. This course will enhance students' occupational levels of training, understanding, and skill development in the metal-working processes. Emphasis will be directed toward the principles of metallurgy, metal lathe operation, forging methods, casting process, welding, and heat-treating procedures. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Metalworking III** | **METALWRKG III** | **1** | **L3C** | **48.0511** |

*Prerequisite: Metalworking II*

This course is a continuation of Metalworking II. This course is designed to review the elements and processes of metalworking. Students will further develop skills by learning complex metal machining procedures, metallurgy, and industrial production methods and controls. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Metalworking Advanced Studies** | **METALWRKG AS** | **1** | **AS** | **48.0511** |

*Prerequisite: Metalworking III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology I** | **WELDING TECH I** | **1** | **L1** | **48.0508** |

*Prerequisite: None*

This course will introduce the student to the concepts and practices in welding while allowing the more ambitious student to gain occupational training experience necessary to participate in the American Welding Society Certification test. This course is intended to provide students with the basic knowledge, skills, and theory in the characteristics of metals, their structure and properties, and welding technologies. Students will gain an understanding of welding equipment, tools, safety procedures, machine operation, and industrial applications, and provide them with entry-level skills for employment.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology II** | **WELDING TECH II** | **1** | **L2** | **48.0508** |

*Prerequisite: Welding Technology I*

This course is a continuation of Welding I. This course provides intermediate welding students the ability to augment and further their skills and knowledge levels. Areas of study will include advanced layout and fabrication methodologies, gas tungsten arc welding of aluminum, stainless steel and TIG spot welding, welding metallurgy, and electric theory. All student activities are designed to enhance students' skill levels toward achievement of American Welding Society certification and/or American Society of Mechanical Engineering welding certification. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology II LAB** | **WELDING TECH II L** | **1** | **L2L** | **48.0508** |

*Prerequisite: Concurrent enrollment in Welding Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology III** | **WELDING TECH III** | **1** | **L3C** | **48.0508** |

*Prerequisite: Welding Technology II*

This course is a continuation of Welding II. This course provides advanced welding students the ability to augment and further their skills and knowledge levels. All student activities are designed to prepare the students' skill levels to achieve the American Welding Society certification and/or American Society of Mechanical Engineering welding certification. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology III LAB** | **WELDING TECH III L** | **1** | **L3L** | **48.0508** |

*Prerequisite: Concurrent enrollment in Welding Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Welding Technology Advanced Studies** | **WELDING TECH AS** | **1** | **AS** | **48.0508** |

*Prerequisite: Welding III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Manufacturing** | **WORK EXPER MANUF** | **1** | **WK** | **99.0013** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aerospace Engineering I** | **AEROSPACE ENG I** | **1** | **L1** | **14.0201** |

*Prerequisite: None*

This course will introduce students to Aerospace Engineering and focus on exposing students to the engineering design process, teamwork, research, analysis, communication methods, human factors, engineering standards, and technical documentation. Students will use engineering and scientific concepts to find solutions to engineering design problems. Students will demonstrate knowledge of the history of flight and its ongoing development, understand the fundamentals of aircraft aerodynamics, structures, propulsion, and navigation, demonstrate the ability to construct and fly an aerodynamic vehicle, understand the fundamentals of rocket and spacecraft design, structures, and propulsion systems, and demonstrate the ability to construct and launch a small scale rocket. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aerospace Engineering II** | **AEROSPACE ENG II** | **1** | **L2** | **14.0201** |

*Prerequisite: Aerospace Engineering I*

This course is a continuation of Aerospace Engineering I. This course provides intermediate aerospace engineering students with an introduction to the interdisciplinary aspects of the engineering of aerospace systems. It is a project-based course, demonstrating how the engineering profession is a multi-disciplinary field. Students are involved in an array of conceptual exercises, simple to intermediate design activities, and projects dealing with engineering in aerospace-related areas including Computer Aided Design (CAD), Aircraft Design and Robotics. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aerospace Engineering III** | **AEROSPACE ENG III** | **1** | **L3C** | **14.0201** |

*Prerequisite: Aerospace Engineering II*

This course is a continuation of Aerospace Engineering II. This course provides advanced aerospace engineering students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Aerospace Engineering I and II. Areas of study include Computing for Engineers, MATLAB, C++, Computer Aided Design (CAD), Graphical Communications applications, Orbital Mechanics, Robotics and Unmanned Aerial Systems (UAS), The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aerospace Engineering Advanced Studies** | **AEROSPACE ENG AS** | **1** | **AS** | **14.0201** |

*Prerequisite: Aerospace Engineering III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Energy Technologies I** | **ENERGY TECH I** | **1** | **L1** | **15.0503** |

*Prerequisite: None*

This course introduces students to the power industry. Students will gain an understanding of safety procedures, equipment, tools, basic electricity principles, and the various energy sources. Students will also explore environmental impacts and availability of energy resources. Students will be introduced to career opportunities and necessary job skills.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Energy Technologies II** | **ENERGY TECH II** | **1** | **L2** | **15.0503** |

*Prerequisite: Energy Technologies I*

This course is a continuation of Energy Technologies I. This course provides intermediate energy technologies students with instruction in energy forms, energy principles, efficiency concepts, building systems, and policies. Students will engage in the use and development of energy conversion systems. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Energy Technologies III** | **ENERGY TECH III** | **1** | **L3C** | **15.0503** |

*Prerequisite: Energy Technologies II*

This course is a continuation of Energy Technologies II. This course provides advanced energy technologies students with instruction in advanced techniques and processes. Areas of emphasis include solar energy, wind energy, and geothermal energy resources. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Energy Technologies Advanced Studies** | **ENERGY TECH AS** | **1** | **AS** | **15.0503** |

*Prerequisite: Energy Technologies III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Aerospace Engineering** | **PLTW AEROSPACE ENG** | **1** | **L3C** | **14.0201** |

*Prerequisite: PLTW-Principles of Engineering*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. This course explores the evolution of flight, navigation and control, flight fundamentals, aerospace materials, propulsion, space travel, and orbital mechanics. In addition, this course presents alternative applications for aerospace engineering concepts. Students analyze, design, and build aerospace systems. They apply knowledge gained throughout the course in a final presentation about the future of the industry and their professional goals.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Civil Engineering and Architecture** | **PLTW CIVIL ENG** | **1** | **L3C** | **14.0401** |

*Prerequisite: PLTW-Principles of Engineering*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. In addition, students use 3D design software to design and document solutions for major course projects. Students communicate and present solutions to their peers and members of a professional community of engineers and architects.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Computer Integrated Manufacturing** | **PLTW COMP INT MFG** | **1** | **L3C** | **14.1901** |

*Prerequisite: PLTW-Principles of Engineering*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. Students answer the questions: How are things made? What processes go into creating products? Is the process for making a water bottle the same as it is for a musical instrument? How do assembly lines work? How has automation changed the face of manufacturing? While students discover the answers to these questions, they're learning about the history of manufacturing, robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Digital Electronics** | **PLTW DIG ELEC** | **1** | **L3C** | **15.0303** |

*Prerequisite: PLTW-Principles of Engineering*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. Digital electronics is the foundation of all modern electronic devices such as mobile phones, MP3 players, laptop computers, digital cameras and high-definition televisions. Students are introduced to the process of combinational and sequential logic design, engineering standards and technical documentation.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Engineering Design and Development** | **PLTW ENG DESG DEV** | **1** | **AS** | **14.0101** |

*Prerequisite: PLTW-Aerospace Engineering or PLTW-Biotechnical Engineering or PLTW-Civil Engineering and Architecture or PLTW-Computer Integrated Manufacturing or PLTW-Digital Electronics*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is the capstone course of the Project Lead the Way™ Pathway to Engineering curriculum. In this capstone course, students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process. Students perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams design, build, and test their solutions while working closely with industry professionals who provide mentoring opportunities. Finally, student teams present and defend their original solution to an outside panel. Upon successful completion of this program, students will be prepared for entry into an Engineering program at the college level.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Environmental Sustainability** | **PLTW ENVIRON SUS** | **1** | **L3C** | **14.0501** |

*Prerequisite: PLTW-Principles of Engineering*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. In this course students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy. Applying knowledge of engineering, biology, and ecology through hands-on activities and simulations, students research and design potential solutions to these true-to-life challenges..

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Introduction to Engineering Design** | **PLTW ENG DESG** | **1** | **L1** | **14.0101** |

*Prerequisite: None*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is the entry-level course of the Project Lead the Way™ Pathway to Engineering curriculum. The major focus of IED is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **PLTW-Principles of Engineering** | **PLTW PRIN ENG** | **1** | **L2** | **14.0101** |

*Prerequisite: PLTW-Introduction to Engineering Design*

***Schools must be affiliated with the Project Lead The Way™ program to offer this course****

This course is a continuation of the Project Lead the Way™ Pathway to Engineering curriculum. This survey course exposes students to major concepts they'll encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Science Technology Engineering Mathematics** | **WORK EXPER STEM** | **1** | **WK** | **99.0015** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

## TRANSPORTATION, DISTRIBUTION & LOGISTICS

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician I** | **AUTO SERV I** | **1** | **L1** | **47.0604** |

*Prerequisite: None*

This course will introduce students to the operational and scientific nature of the automotive component systems including fuel, intake, exhaust, ignition, lubrication, braking, cooling, and suspension systems. Practical application of safe work habits and the correct use of tools and precision test instruments will be emphasized throughout the course. Students will utilize the AYES school to career activities, curriculum, and processes. The program must be certified and follow the national NATEF - AST program standards and requirements of AYES (Automotive Youth Education Systems).

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician II** | **AUTO SERV II** | **1** | **L2** | **47.0604** |

*Prerequisite: Automotive Service Technician I*

This course is a continuation of Automotive Service Technician I. This course provides intermediate automotive technology students with laboratory activities, including tasks with advanced equipment, to diagnose and service modern automotive systems. This course focuses on safety, engine repair, drive axles, heating and air conditioning, engine performance, braking systems, basic electrical systems, and employability skills. Students will utilize the AYES school to career activities, curriculum, and processes. The program must be certified and follow the national NATEF - AST program standards and requirements of AYES (Automotive Youth Education Systems). The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician II LAB** | **AUTO SERV II L** | **1** | **L2L** | **47.0604** |

*Prerequisite: Concurrent enrollment in Automotive Service Technician II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician III** | **AUTO SERV III** | **1** | **L3** | **47.0604** |

*Prerequisite: Automotive Service Technician II*

This course is a continuation of Automotive Service Technician II. This course provides advanced automotive technology students with in-depth study and skill development in engine performance, brakes, steering and suspension service, and drive train service. Students will utilize the AYES school to career activities, curriculum, and processes. The program must be certified and follow the national NATEF - AST program standards and requirements of AYES (Automotive Youth Education Systems). The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician III LAB** | **AUTO SERV III L** | **1** | **L3L** | **47.0604** |

*Prerequisite: Concurrent enrollment in Automotive Service Technician III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician IV** | **AUTO SERV IV** | **1** | **L4C** | **47.0604** |

*Prerequisite: Automotive Service Technician III*

This course is a continuation of Automotive Service Technician III. This course provides advanced automotive technology students with in-depth study and skill development in the repair of automotive engines, automatic transmission, manual transmission, drive train service, and air conditioning system service. Students will utilize the AYES school to career activities, curriculum, and processes. The program must be certified and follow the national NATEF - AST program standards and requirements of AYES (Automotive Youth Education Systems). The appropriate use of technology and industry-standard equipment is an integral part of this course. An internship may be incorporated into the course of study to assist students in making a transition from school to work. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Service Technician IV LAB** | **AUTO SERV IV L** | **1** | **L4L** | **47.0604** |

*Prerequisite: Concurrent enrollment in Automotive Technology IV*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology I** | **AUTO TECH I** | **1** | **L1** | **47.0600** |

*Prerequisite: None*

This course will introduce students to the operational and scientific nature of the automotive component systems including fuel, intake, exhaust, ignition, lubrication, braking, cooling, and suspension systems. Practical application of safe work habits and the correct use of tools and precision test instruments will be emphasized throughout the course

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology II** | **AUTO TECH II** | **1** | **L2** | **47.0600** |

*Prerequisite: Automotive Technology I*

This course is a continuation of Automotive Service Technology I. This course provides intermediate automotive technology students with laboratory activities including tasks with advanced equipment to diagnose and service modern automotive systems. This course focuses on safety, engine repair, automatic transmission, manual transmission, manual drive train, drive axles, clutch systems, suspension and steering, heating and air conditioning, engine performance, braking systems, and basic electrical systems. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology II LAB** | **AUTO TECH II L** | **1** | **L2L** | **47.0600** |

*Prerequisite: Concurrent enrollment in Automotive Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology III** | **AUTO TECH III** | **1** | **L3C** | **47.0600** |

*Prerequisite: Automotive Technology II*

This course is a continuation of Automotive Service Technology II. This course provides advanced automotive technology students with in-depth study and skill development in the repair of automotive engines, engine performance, machine operations, steering and suspension service, drive train service, and air conditioning system service. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology III LAB** | **AUTO TECH III L** | **1** | **L3L** | **47.0600** |

*Prerequisite: Concurrent enrollment in Automotive Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Automotive Technology Advanced Studies** | **AUTO TECH AS** | **1** | **AS** | **47.0600** |

*Prerequisite: Automotive Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Maintenance Technician I** | **AVI MAINT TECH I** | **1** | **L1** | **47.0608** |

*Prerequisite: None*

This course will introduce students to the operational and scientific nature of the aviation maintenance industry. This course will introduce students to the practical application of safe work habits and the correct use of tools and precision test instruments. Students will practice safe working habits and learn the components of a reciprocating engine; aircraft control systems, and avionics systems. The course will include aircraft service requirements, ground operation procedures, and calculating the cost associated with aircraft preventive maintenance. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Maintenance Technician II** | **AVI MAINT TECH II** | **1** | **L2** | **47.0608** |

*Prerequisite: Aviation Maintenance Technician I*

This course is a continuation of Aviation Maintenance Technician I. This course provides intermediate aviation maintenance technician students with instruction in general aeronautics. It includes the study of physical mathematics, weight and balance, FAA regulations, common and special tools and measuring devices, fluid lines, hardware, aircraft servicing, and documentation (Part 65). The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Maintenance Technician III** | **AVI MAINT TECH III** | **1** | **L3C** | **47.0608** |

*Prerequisite: Aviation Maintenance Technician II*

This course is a continuation of Aviation Maintenance Technician II. This course provides advanced aviation maintenance technician students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Aircraft Maintenance Technician I and II. Areas of study include an introduction to aircraft systems. Discussions include a study of the principals and concepts of basic DC and AC electrical theory, magnetism, batteries, generators, motors, voltage regulators, circuit protection, and electrical component installations (FAR Part 65). The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Maintenance Technician Advanced Studies** | **AVI MAINT TECH AS** | **1** | **AS** | **47.0608** |

*Prerequisite: Aviation Maintenance Technician III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Technology I** | **AVIATION TECH I** | **1** | **L1** | **49.0101** |

*Prerequisite: None*

This course is designed as an introduction to general aeronautics. It includes the study of physical mathematics, weight and balance, FAA regulations, common and special tools and measuring devices, fluid lines, hardware, aircraft servicing, and documentation (FAR Part 65). This course is also designed to expand and to prepare the prospective A&P technician for the electrical portion of the Oral and Practical exam in obtaining an FAA certified license. Provide basic information on the principles, fundamentals and technical procedures in the areas of aircraft, aerospace and aviation professions. Students will learn the history of flight, developmental trends, the principles of flight and navigation, the flight environment of an aerospace vehicle, the missions and roles of today's aerospace vehicles, the fundamentals of rocketry and space travel, and the physiology of flight. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Aviation Technology II** | **AVIATION TECH II** | **1** | **L2** | **49.0101** |

*Prerequisite: Aviation Technology I*

This course is a continuation of Aviation Technology I. This course provides intermediate aviation technology students with an in-depth knowledge about the systems and structures found on today's aircraft. The student will become familiar with aircraft structural materials, coverings, electrical systems, hydraulics, computer systems, environmental systems, safety equipment, control systems, power plants, and avionics. Through the knowledge gained in studying aircraft systems and structures, the student will learn the fundamentals to maintain and safely operate an aircraft. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| Course Title | Abbreviated Name | Credits | Level | CIP Code |
|---|---|---|---|---|
| **Aviation Technology III** | **AVIATION TECH III** | **1** | **L3C** | **49.0101** |

*Prerequisite: Aviation Technology II*

This course is a continuation of Aviation Technology II. This course provides advanced aviation technology students with instruction in advanced techniques and processes and will prepare the student to successfully take the FAA Part 61.105b Private Pilot Knowledge Test. This course introduces students to the principles of flight, the aircraft flight environment, aircraft performance standards, flight controls, metrology, radio communications, flight planning, FAA regulations, navigation, the human body in flight, airman decision making, accident prevention, Airman Information Manual (AIM), and the fundamentals of instrument flight. This course prepares the students to take the FAA Part 61.109 Private Pilot Written Exam. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| Course Title | Abbreviated Name | Credits | Level | CIP Code |
|---|---|---|---|---|
| **Aviation Technology Advanced Studies** | **AVIATION TECH AS** | **1** | **AS** | **49.0101** |

*Prerequisite: Aviation Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology I** | **COLL REPAIR I** | **1** | **L1** | **47.0603** |

*Prerequisite: None*

This course provides entry-level collision repair students with an orientation to collision repair and refinishing. Students will develop their skills through industry standard tools and equipment. Areas of emphasis include safety, surface preparation, dent repair, and top coat application.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology II** | **COLL REPAIR II** | **1** | **L2** | **47.0603** |

*Prerequisite: Collision Repair Technology I*

This course is a continuation of Collision Repair Technology I. This course provides intermediate collision repair students with instruction in metal repair, painting techniques, and the application of paint systems. Areas of emphasis include inspection, estimating, adhesives, paint mixing, defects, and customer relations. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology II LAB** | **COLL REPAIR II L** | **1** | **L2L** | **47.0603** |

*Prerequisite: Concurrent enrollment in Collision Repair Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology III** | **COLL REPAIR III** | **1** | **L3C** | **47.0603** |

*Prerequisite: Collision Repair Technology II*

This course is a continuation of Collision Repair Technology II. This course provides advanced collision repair students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Collision Repair Technology I and II. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology III LAB** | **COLL REPAIR III L** | **1** | **L3L** | **47.0603** |

*Prerequisite: Concurrent enrollment in Collision Repair Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Collision Repair Technology Advanced Studies** | **COLL REPAIR AS** | **1** | **AS** | **47.0603** |

*Prerequisite: Collision Repair Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology I** | **DIESEL TECH I** | **1** | **L1** | **47.0605** |

*Prerequisite: None*

This course provides students with fundamental diesel systems theory, service and repair. It will introduce the operational and scientific nature of diesel systems. It will provide students with a basic knowledge of diesel systems and operating principles. The repair, maintenance, and diagnostic procedures will enhance students' awareness of the applications of scientific principles. The students will study the technological nature of diesel-powered equipment. The proper and safe use of tools and precision test equipment will be emphasized throughout the course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology II** | **DIESEL TECH II** | **1** | **L2** | **47.0605** |

*Prerequisite: Diesel Technology I*

This course is a continuation of Diesel Technology I. This course is designed to provide intermediate students with diesel systems service and repair skills. It will provide students with in-depth knowledge of diesel systems operating principles and the applications of diesel power. Areas of study may include: engines, steering and suspension, preventative maintenance, hydraulics, electrical systems, and braking systems. Practical application of safe work habits and the correct use of tools, shop equipment, and precision test instruments will be emphasized throughout the course. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology II LAB** | **DIESEL TECH II L** | **1** | **L2L** | **47.0605** |

*Prerequisite: Concurrent enrollment in Diesel Technology II*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology III** | **DIESEL TECH III** | **1** | **L3C** | **47.0605** |

*Prerequisite: Diesel Technology II*

This course is a continuation of Diesel Technology II. This course is designed to provide advanced students with diesel systems service and repair skills. Areas of study may include: engines, steering and suspension, preventative maintenance, hydraulics, electrical systems, and braking systems. Practical application of safe work habits and the correct use of tools, shop equipment, and precision test instruments will be emphasized throughout the course. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology III LAB** | **DIESEL TECH III L** | **1** | **L3L** | **47.0605** |

*Prerequisite: Concurrent enrollment in Diesel Technology III*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Diesel Technology Advanced Studies** | **DIESEL TECH AS** | **1** | **AS** | **47.0605** |

*Prerequisite: Diesel Technology III*

This course is offered to students who have achieved all content standards in a program whose desire is to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

## WORK EXPERIENCE:

| COURSE TITLE | ABBREVIATED NAME | CREDITS | LEVEL | CIP CODE |
|---|---|---|---|---|
| **Work Experience – Transportation Distribution and Logistics** | **WORK EXPER TRANS** | **1** | **WK** | **99.0016** |

*Prerequisite: None*

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.