NEVADA
CAREER & TECHNICAL EDUCATION
COURSE CATALOG
2019-2020

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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 careers. 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) Education, Hospitality and Human Services; (4) Health Sciences and Public Safety; (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 of Study Description, (2) Program Course Sequences; (3) Course Descriptions; and (4) Course Data Information.

PROGRAM OF STUDY DESCRIPTION

The program of study description provides a brief explanation of the overall purpose and instructional topics in which the student will have access to while completing the program of study.

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.

The **core course sequence** identifies the courses listed in the sequential order required for the complete delivery of the state standards for that program. Each student must progress through the core course sequence and pass each course to reach the “Completer” status.

The **complementary courses** are those courses that directly support additional time and instruction of the state standards, and must 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. They 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: • enrollment in a complementary course does not impede the completion of the core course sequence • the course relates to the student's program of study • the student's schedule allows for additional courses • the course is an approved course in the Nevada CTE Course Catalog • prerequisites of the course are 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. A technical assessment will be implemented for those programs with current industry validated standards.

COURSE DESCRIPTIONS

The course descriptions are organized alphabetically within each program area's career cluster and include the course prerequisites and description. 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. An example for a Business Management course is shown below.

Business Management I

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 DATA INFORMATION

The **course data information** is to be used locally exactly as written in this catalog. This is especially important since it is those **course titles, abbreviated names, levels, CIP codes, credits, Non-Traditional, and SCED Codes**[1] that will populate the State Infinite Campus System and the System for Accountability Information in Nevada (SAIN). Through accurate use of the course data information the CTE data reporting will be equally consistent and accurate. Furthermore, the data system will not recognize any course data that is inconsistent with those in this catalog and will prohibit the collection and recognition of the CTE course.

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 become a "Completer". The student should also be prepared for the CTE program assessments

(Workplace Readiness Skills Assessment and End-of-Program Technical Assessment). The assessments 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
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.

CTE is largely defined by courses that 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; which require one-half credit semester courses.

The **Non-Traditional** column identifies the courses and gender for which individuals from one gender comprise less than 25 percent of the individuals employed in each such career pathway.

The **CIP Codes** and **SCED Codes**[1] are utilized for correctly aligning CTE courses to respective programs of study to ensure accurate state/federal data reporting, allocation funding, assessment rostering, etc.

[1] Reference the Nevada SCED Code Directory for complete information for entering SCED codes into the local Infinite Campus system. Contact the CTE accountability office for more information.

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.

SUMMARY OF CATALOG UPDATES AND REVISIONS BY PROGRAM AREA

Agriculture and Natural Resources

- Added SCED Code to Course Data Information
- Updated Agriculture Business course names
- Updated Agriculture Leadership Communication and Policy course names

Business and Marketing Education

- Added new complimentary course "Business Fundamentals" to be used by all Programs of Study
- Added SCED Code to Course Data Information
- Updated HSB-Leadership and HSB-Wealth Manager course levels to be L2
- Obsoleted the Entrepreneurship Program of Study*
- Obsoleted the Sports and Entertainment Marketing Program of Study*

Education, Hospitality and Human Services

- Added SCED Code to Course Data Information
- Updated Prerequisites for Teaching and Training

Health Sciences and Public Safety

- Added SCED Code to Course Data Information

Information and Media Technologies

- Added SCED Code to Course Data Information
- Updated the Computer Science core sequence. (level changes)
- Updated the Computer Science course descriptions and prerequisites
- Obsoleted the IT-Service and Support Program of Study*

Skilled and Technical Sciences

- Added SCED Code to Course Data Information

***** Obsoleted Programs of Study course data information will remain in the master course list for two (2) school years to ensure current students have the ability to complete the Program of Study for which they started.

AGRICULTURE
&
NATURAL RESOURCES

CAREER CLUSTERS & PROGRAM ALIGNMENT

- AGRICULTURE, FOOD & NATURAL RESOURCES -

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

PROGRAM DESCRIPTIONS

- AGRICULTURE, FOOD & NATURAL RESOURCES -

Agricultural Business Systems

The Agricultural Business Systems program provides agriculture students with the information and skills necessary for success in agribusiness. Areas of study include agriculture economics, business planning, financial concepts, marketing, sales, careers, and leadership development.

Agricultural Leadership, Communication & Policy

The Agricultural Leadership, Communication and Policy program provides agriculture students with instruction on leadership and communication skills in the agricultural field. Areas of study include research methodology, verbal and written communication, journalism, mass media, agriculture policy, careers, and leadership development.

Agricultural Mechanics Technology

The Agricultural Mechanics Technology program covers the foundational skills necessary for agriculture mechanics and industry employment. Areas of study include general shop safety, basic welding, electrical applications, water management, agricultural drafting and construction, engines and power, basic hydraulics, and machinery maintenance and repair.

Animal Science

The Animal Science program provides students with the principles of the livestock and red meat industry. Areas of study include the basic anatomy and physiology of domestic animals, genetics, reproduction, animal health and welfare, evaluation and selection of animals, land stewardship, marketing, and leadership development.

Biotechnology

The Biotechnology program provides students with the principles of the biotechnology industry. Areas of study include animal and plant science applications, biochemistry, principles of genetic transfer and genetically modified organisms, bio-manufacturing, applications to the food industry, and trends in agricultural biotechnology research.

Environmental Management

The Environmental Management program provides agriculture students with the information and skills necessary for success in environmental management. Areas of study include ecology, environmental quality, sustainable use, GIS and GPS, energy, hydrology and hydrogeology, law and public policy, environmental site analysis, careers, and leadership development.

Floriculture Design & Management

The Floriculture Design and Management program provides students with the principles of floral design and management. 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, recordkeeping, floral business management, and leadership development.

Food Science Technology

The Food Science Technology program provides students with 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 safety and preparation, handling and storage, food marketing, and leadership development.

Landscape Design & Management

The Landscape Design and Management program provides students with the principles of landscape design and management. Areas of study include safety, design principles and application, plant selection and care, hardscaping, irrigation, integrated pest management, careers, and leadership development.

Natural Resources & Wildlife Management

The Natural Resources and Wildlife Management program provides students with the concepts of natural resources science and management. Areas of study include ecological concepts and scientific principles, rangeland management, fire ecology, GPS and GIS, fish and wild ecology, forestry, renewable and nonrenewable resources, fish and wildlife management, and leadership development.

Ornamental Horticulture/Greenhouse Management

The Ornamental Horticulture/Greenhouse Management program provides students with the principles of plant science, ornamental horticulture and greenhouse management. Areas of study include plant anatomy and physiology, plant identification, propagation, growing media, nutrition, integrated pest management, plant technologies, growing greenhouse crops, greenhouse business concepts, and leadership development.

Veterinary Science

The Veterinary Science program provides agriculture students with the information and skills necessary for success in veterinary science. Areas of study include safety and sanitation in the clinical setting, medical terminology, anatomy and physiology, medical math, lab techniques, diseases and disorders, nutrition, clinical procedures, office procedures, ethical and animal welfare issues, careers, and leadership development.

PROGRAM COURSE SEQUENCES

- AGRICULTURE, FOOD & NATURAL RESOURCES -

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

Program Name	Course Sequence	State Skill Standards*
Floriculture Design and Management	**Core Course Sequence** Agriculture Science I - *or* - Horticulture Science Plant Science and Ornamental Horticulture Floriculture **Complementary Course(s)** Floriculture Advanced Studies	Agriculture Science - *or* - Horticulture Science - & - Ornamental Horticulture/Greenhouse Management - & - Floriculture Design and Management
Food Science Technology	**Core Course Sequence** Agriculture Science I Agriculture Science II Food Science Technology **Complementary Course(s)** Food Science Technology Advanced Studies	Agriculture Science - & - Food Science Technology
Landscape Design and Management	**Core Course Sequence** Agriculture Science I - *or* - Horticulture Science Landscaping I Landscaping II **Complementary Course(s)** Landscaping Advanced Studies	Agriculture Science - *or* - Horticulture Science - & - Landscape Design and Management
Natural Resources and Wildlife Management	**Core Course Sequence** Agriculture Science I Agriculture Science II Natural Resources and Wildlife Management **Complementary Course(s)** Natural Resources and Wildlife Management Advanced Studies	Agriculture Science - & - Natural Resources and Wildlife Management
Ornamental Horticulture/Greenhouse Management	**Core Course Sequence** Agriculture Science I - *or* - Horticulture Science Plant Science and Ornamental Horticulture Greenhouse Management **Complementary Course(s)** Greenhouse Management Advanced Studies	Agriculture Science - *or* - Horticulture Science - & - Ornamental Horticulture/Greenhouse Management
Veterinary Science	**Core Course Sequence** Agriculture Science I Agriculture Science II Veterinary Science **Complementary Course(s)** Veterinary Science Advanced Studies	Agriculture Science - & - 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 -

Agricultural Business

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 Agricultural 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.

Agricultural Business Advanced Studies

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.

Agricultural Leadership Communication and Policy

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 Agricultural 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.

Agricultural LCP Advanced Studies

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.

Agricultural Mechanics Technology I

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 Agricultural Experience Programs.

Agricultural Mechanics Technology II

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 Agricultural Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Agricultural Mechanics Technology III

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 Agricultural 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.

Agricultural Mechanics Technology Advanced Studies

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.

Agriculture Science I

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 Agricultural Experience Programs.

Agriculture Science II

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 Agricultural Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Animal Science

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 Agricultural 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.

Animal Science Advanced Studies

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.

Biotechnology

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. Areas of study will include a focus on animal and plant science applications, biochemistry, principles of genetic transfer and genetically modified organisms, bio-manufacturing, applications to the food industry, and trends in agricultural biotechnology research. An essential part of this course will be leadership activities and Supervised Agricultural 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.

Biotechnology Advanced Studies

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.

Environmental Management I

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 Agricultural Experience Programs.

Environmental Management II

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 Agricultural Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Environmental Management III

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 Agricultural 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.

Environmental Management Advanced Studies

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.

Floriculture

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 Agricultural 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.

Floriculture Advanced Studies

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.

Food Science Technology

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 Agricultural 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.

Food Science Technology Advanced Studies

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.

Greenhouse Management

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 Agricultural 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.

Greenhouse Management Advanced Studies

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.

Horticulture Science

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 Agricultural Experience Programs.

Landscaping I

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 Agricultural Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Landscaping II

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 Agricultural 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.

Landscaping Advanced Studies

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.

Natural Resources and Wildlife Management

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 Agricultural 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.

Natural Resources and Wildlife Management Advanced Studies

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.

Plant Science and Ornamental Horticulture

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 Agricultural Experience Programs. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Veterinary Science

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 Agricultural 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.

Veterinary Science Advanced Studies

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 – Agriculture Food and Natural Resources

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.

COURSE DATA INFORMATION

- AGRICULTURE & NATURAL RESOURCES -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Agricultural Business	AG BUSINESS	L3C	01.0102	1	F	18201
Agricultural Business Advanced Studies	AG BUSINESS AS	AS	01.0102	1	F	18201
Agricultural Leadership Communication and Policy	AG LEADERSHIP	L3C	01.0899	1	N	18203
Agricultural LCP Advanced Studies	AG LEADERSHIP AS	AS	01.0899	1	N	18203
Agricultural Mechanics Technology I	AG MECH TECH I	L1	01.0205	1	F	18402
Agricultural Mechanics Technology II	AG MECH TECH II	L2	01.0205	1	F	18402
Agricultural Mechanics Technology III	AG MECH TECH III	L3C	01.0205	1	F	18402
Agricultural Mechanics Technology Advanced Studies	AG MECH TECH AS	AS	01.0205	1	F	18402
Agriculture Science I	AG SCIENCE I	L1	01.0000	1	F	18002
Agriculture Science II	AG SCIENCE II	L2	01.0000	1	F	18002
Animal Science	ANIMAL SCI	L3C	01.0901	1	F	18101
Animal Science Advanced Studies	ANIMAL SCI AS	AS	01.0901	1	F	18101
Biotechnology	BIO TECH	L3C	26.1201	1	F	18308
Biotechnology Advanced Studies	BIO TECH AS	AS	26.1201	1	F	18308
Environmental Management I	ENVIRON MGMT I	L1	03.0101	1	F	18504
Environmental Management II	ENVIRON MGMT II	L2	03.0101	1	F	18504
Environmental Management III	ENVIRON MGMT III	L3C	03.0101	1	F	18504
Environmental Management Advanced Studies	ENVIRON MGMT AS	AS	03.0101	1	F	18504
Floriculture	FLORAL	L3C	01.0608	1	N	18056
Floriculture Advanced Studies	FLORAL AS	AS	01.0608	1	N	18056
Food Science Technology	FOOD SCI TECH	L3C	01.1002	1	F	18305
Food Science Technology Advanced Studies	FOOD SCI TECH AS	AS	01.1002	1	F	18305
Greenhouse Management	GREENHOUSE MGMT	L3C	01.0604	1	F	18053
Greenhouse Management Advanced Studies	GREENHOUSE MGMT AS	AS	01.0604	1	F	18053
Horticulture Science	HORTICULTURE SCI	L1	01.1103	1	F	18052
Landscaping I	LANDSCAPE I	L2	01.0605	1	F	18054
Landscaping II	LANDSCAPE II	L3C	01.0605	1	F	18054
Landscaping Advanced Studies	LANDSCAPE AS	AS	01.0605	1	F	18054
Natural Resources and Wildlife Management	NAT RES MGMT	L3C	03.0601	1	F	18501
Natural Resources and Wildlife Management Advanced Studies	NAT RES MGMT AS	AS	03.0601	1	F	18501
Plant Science and Ornamental Horticulture	PLANT SCI HORT	L2	01.0603	1	F	18053
Veterinary Science	VETERINARY SCI	L3C	01.0903	1	F	18105
Veterinary Science Advanced Studies	VETERINARY SCI AS	AS	01.0903	1	F	18105
Work Experience - Agriculture Food and Natural Resources	WORK EXPER AFNR	WK	99.0001	1	F	18998

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BUSINESS
&
MARKETING EDUCATION

CAREER CLUSTERS & PROGRAM ALIGNMENT

- BUSINESS, MANAGEMENT & ADMINISTRATION -

- Administrative Services
- Business Management

- FINANCE -

- Accounting & Finance

- MARKETING, SALES & SERVICE -

- Marketing

PROGRAM DESCRIPTIONS

- BUSINESS, MANAGEMENT & ADMINISTRATION -

Administrative Services

The Administrative Services program provides students with the principles of business office procedures and management. Areas of study include software applications, accounting functions, customer relations, human resources, and career exploration.

Business Management

The Business Management program provides students with the overall principles of business management. Areas of study include economics, budgeting, human resource management, operations, strategic management, and financial-based decision making.

- FINANCE -

Accounting & Finance

The Accounting & Finance program provides students with a foundation in accounting, financial information, and financial business decision making. Areas of study include laws and regulations, evaluating financial information, banking, investment, economics, and risk management concepts.

- MARKETING, SALES & SERVICES -

Marketing

The Marketing program provides students with the overall principles of marketing and business administration. Areas of study include economic systems, business fundamentals, marketing information, product/service management, promotion, pricing and professional selling.

PROGRAM COURSE SEQUENCES

- BUSINESS, MANAGEMENT & ADMINISTRATION -

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

- FINANCE -

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

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

- *MARKETING, SALES & SERVICE* -

Program Name	Course Sequence	State Skill Standards*
Marketing	**Core Course Sequence** Principles of Business and Marketing ~ Marketing I Marketing II **Complementary Course(s)** Marketing Advanced Studies	Marketing

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

~ Both HSB Level one courses may be used as an optional level one course to complete the program of study in Marketing.

COURSE DESCRIPTIONS

- BUSINESS, MANAGEMENT & ADMINISTRATION -

Business Fundamentals

Prerequisite: Concurrent enrollment in any CTE Program of Study Core Course

This course is complementary to any CTE program of study. The course develops a student's foundational understanding of concepts in business ethics, customer relations, economics, entrepreneurship, management, finance, and marketing. Students develop verbal and written communication skills appropriate to the business side of careers in career and technical education programs of study. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Business Management I

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.

Business Management II

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.

Business Management Advanced Studies

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.

Business Software Applications

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.

HSB-Business Economics

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

HSB-Business Strategies

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.

HSB-Leadership

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

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.

HSB-Principles of Business

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.

HSB-Principles of Finance

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.

HSB-Principles of Management

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.

HSB-Principles of Marketing

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.

HSB-Wealth Management

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

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.

Office Management I

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.

Office Management II

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.

Office Management Advanced Studies

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 – Business Management and Administration

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 -

Accounting and Finance I

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.

Accounting and Finance II

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.

Accounting and Finance III

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.

Accounting and Finance Advanced Studies

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.

NAF-Applied Finance

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.

NAF-Business Economics

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.

NAF-Business in a Global Economy

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.

NAF-Entrepreneurship

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.

NAF-Ethics in Business

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.

NAF-Financial Planning

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.

NAF-Financial Services

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.

NAF-Insurance

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.

NAF-Managerial Accounting

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.

NAF-Principles of Accounting

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.

NAF-Principles of Finance

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 – Finance

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 -

Marketing I

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.

Marketing II

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.

Marketing Advanced Studies

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.

Principles of Business and Marketing

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.

Work Experience – Marketing Sales and Service

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.

COURSE DATA INFORMATION

- BUSINESS, MANAGEMENT & ADMINISTRATION -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Business Fundamentals	BUS FUND	L2	52.101	1	N	12051
Business Management I	BUS MGMT I	L2	52.0201	1	N	12052
Business Management II	BUS MGMT II	L3C	52.0201	1	N	12052
Business Management Advanced Studies	BUS MGMT AS	AS	52.0201	1	N	12052
Business Software Applications	BUS SOFT APPS	L1	52.0407	1	M	12003
HSB-Business Economics	HSB BUS ECONOMICS	L1	52.0601	0.5	N	12052
HSB-Business Strategies	HSB BUS STRATEGY	L3C	52.0299	0.5	N	12052
HSB-Leadership	HSB LEADERSHIP	L2	52.0213	0.5	N	12052
HSB-Principles of Business	HSB PRIN BUSINESS	L1	52.0101	0.5	N	12052
HSB-Principles of Finance	HSB PRIN FINANCE	L2	52.0801	0.5	N	12052
HSB-Principles of Management	HSB PRIN MGMT	L3C	52.0201	0.5	N	12052
HSB-Principles of Marketing	HSB PRIN MKTG	L2	52.1401	0.5	N	12052
HSB-Wealth Management	HSB WEALTH MGMT	L2	52.0804	0.5	N	12052
Office Management I	OFFICE MGMT I	L2	52.0204	1	N	12003
Office Management II	OFFICE MGMT II	L3C	52.0204	1	N	12003
Office Management Advanced Studies	OFFICE MGMT AS	AS	52.0204	1	N	12003
Work Experience - Business Management and Administration	WORK EXPER BUS ADM	WK	99.0004	1	N	12998

- FINANCE -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Accounting and Finance I	ACCT FINANCE I	L1	52.0304	1	N	12104
Accounting and Finance II	ACCT FINANCE II	L2	52.0304	1	N	12104
Accounting and Finance III	ACCT FINANCE III	L3C	52.0304	1	N	12104
Accounting and Finance Advanced Studies	ACCT FINANCE AS	AS	52.0304	1	N	12104
NAF-Applied Finance	NAF APPLIED FINC	L3	52.0801	0.5	N	12052
NAF-Business Economics	NAF BUS ECON	L1	52.0601	0.5	N	12052
NAF-Business in a Global Economy	NAF BUS GLOB ECON	L2	45.0605	0.5	N	12052
NAF-Entrepreneurship	NAF ENTREPRENEUR	L2	52.0701	0.5	F	12052
NAF-Ethics in Business	NAF ETHICS IN BUS	L3C	38.0104	0.5	N	12052
NAF-Financial Planning	NAF FINC PLANNING	L2	52.0804	0.5	N	12052
NAF-Financial Services	NAF FINC SERVICES	L2	52.0803	0.5	M	12052
NAF-Insurance	NAF INSURANCE	L3C	52.1701	0.5	N	12052
NAF-Managerial Accounting	NAF MANAGE ACCT	L2	52.0305	0.5	N	12052
NAF-Principles of Accounting	NAF PRIN ACCT	L2	52.0301	0.5	N	12052
NAF-Principles of Finance	OFFICE MGMT AS	AS	52.0204	1	N	12052
Work Experience - Finance	WORK EXPER BUS ADM	WK	99.0004	1	N	12148

- MARKETING, SALES & SERVICE -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Marketing I	MKTG I	L2	52.1401	1	N	12152
Marketing II	MKTG II	L3C	52.1401	1	N	12152
Marketing Advanced Studies	MKTG AS	AS	52.1401	1	N	12152
Principles of Business and Marketing	PRIN BUS MKTG	L1	52.0101	1	N	12051
Work Experience – Marketing Sales and Service	WORK EXPER MARKET	WK	99.0014	1	N	12198

EDUCATION, HOSPITALITY
&
HUMAN SERVICES

CAREER CLUSTERS & PROGRAM ALIGNMENT

- EDUCATION & TRAINING -

- Early Childhood Education
- Teaching & Training

- HOSPITALITY & TOURISM -

- Baking and Pastry
- Culinary Arts
- Hospitality & Tourism

- HUMAN SERVICES -

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

PROGRAM DESCRIPTIONS

- EDUCATION & TRAINING -

Early Childhood Education

The Early Childhood Education program addresses child development, child care, and teaching and learning, to guide the development of young children in an educational setting. Areas of study include planning and implementing developmentally appropriate activities, basic health and safety practices, legal requirements for teaching young children, and the development of a career portfolio.

Teaching & Training

The Teaching & Training program provides students with the principles of Teaching & Training. Areas of study include foundations of education, professional practices, instructional design, educating diverse learners and designing and managing the learning environment.

- HOSPITALITY & TOURISM -

Baking & Pastry

The Baking & Pastry program provides students with an in-depth study of the Baking & 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 also covered.

Culinary Arts

The Culinary Arts program provides students with an introduction to the principles and techniques of commercial food production. Areas of study include basic skills in food handling, food and nutritional science, equipment technology, cooking methods, kitchen safety, sanitation procedures, and employability skills in an environment that models industry standards.

Hospitality & Tourism

The Hospitality & Tourism program provides students with an introduction to many career areas in the hospitality field. Students will learn the roles of jobs in both the front-of-the-house and back-of-the-house in travel and tourism, hotel operations, food and beverage, and event sales and service.

- HUMAN SERVICES -

Cosmetology

Schools must be approved by the governing State Agency in order to offer this program

The Cosmetology program 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, haircoloring, permanent waving, chemical relaxing, and all phases of hair care.

Family & Consumer Sciences

The Family &Consumer Sciences program provides instruction in Family &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.

Foods & Nutrition

The Foods and Nutrition program provides an in-depth study in the areas of food preparation, nutrition and their relationships to personal and family wellness. Students study the importance of food choices and learn preparation techniques to maintain nutrition with the goal of fitness. Other topics include foods and customs, individual needs throughout the lifecycle and occupations in the food services industry.

Human Development

The Human Development program introduces the topic of Human Development. Areas of study include the stages of human growth and development throughout the lifespan. Topics include developmental stages and influences on physical, intellectual, social and emotional growth.

PROGRAM COURSE SEQUENCES

- EDUCATION & TRAINING -

Program Name	Course Sequence	State Skill Standards*
Early Childhood Education	**Core Course Sequence** Early Childhood Education I Early Childhood Education II Early Childhood Education III **Complementary Course(s)** Human Development I ◊ Early Childhood Education II LAB ** Early Childhood Education III LAB ** Early Childhood Education Advanced Studies	Early Childhood Education
Teaching and Training	**Core Course Sequence** Teaching and Training I Teaching and Training II Teaching and Training III **Complementary Course(s)** Teaching and Training Advanced Studies	Teaching & Training

* 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 -

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

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

* 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.

- HUMAN SERVICES -

Program Name	Course Sequence	State Skill Standards*
Cosmetology	**Core Course Sequence** Principles of Cosmetology Cosmetology I Cosmetology II	Cosmetology
Family and Consumer Sciences	**Core Course Sequence** Foods and Nutrition I Human Development I Fashion Design and Construction I ◊ Family and Consumer Sciences **Complementary Course(s)** Interior Design I ◊	Family and Consumer Sciences
Foods and Nutrition	**Core Course Sequence** Foods and Nutrition I Foods and Nutrition II Foods and Nutrition III **Complementary Course(s)** Foods and Nutrition Advanced Studies	Foods and Nutrition
Human Development	**Core Course Sequence** Human Development I Human Development II Human Development III **Complementary Course(s)** 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 listed in the Arts, A/V Technology and Communication Section. (Information & Media Technologies)

COURSE DESCRIPTIONS

- *EDUCATION & TRAINING* -

Early Childhood Education I

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.

Early Childhood Education II

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.

Early Childhood Education II LAB

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.

Early Childhood Education III

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.

Early Childhood Education III LAB

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.

Early Childhood Education Advanced Studies

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.

Teaching and Training I

Prerequisite: None

This course provides students with an introduction to the principles of teaching and training. Areas of emphasis include teaching and learning theory, characteristics of an educator, planning developmentally appropriate lessons, health and safety practices, and fundamentals for development of learners in an educational setting. Students will explore instructional practices that integrate diversity awareness including appreciation of all cultures and their important contributions to society. The appropriate use of technology and industry-standard equipment are an integral part of the course. Students will research the requirements of teaching and training careers and begin to develop a career portfolio.

Teaching and Training II

Prerequisite: Teaching and Training I

This course is a continuation of Teaching and Training I. This course provides Teaching and Training II students with instruction in intermediate techniques and processes including ethics, professionalism, reflective practice, lesson planning and implementation, classroom management, characteristics of a diverse learner, and rules and regulations. The appropriate use of technology and industry-standard equipment are an integral part of the course. Students will research the requirements of teaching and training careers and continue to develop a career portfolio.

Teaching and Training III

Prerequisite: Teaching and Training II

This course is a continuation of Teaching and Training II. This course provides Teaching and Training III students with instruction in advanced techniques and processes. Students will continue to develop all skills learned in Teaching and Training 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.

Teaching and Training Advanced Studies

Prerequisite: Teaching and Training 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 – Education and Training

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 -

Baking and Pastry I

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.

Baking and Pastry I LAB

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.

Baking and Pastry II

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.

Baking and Pastry II LAB

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.

Baking and Pastry Advanced Studies

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.

Culinary Arts I

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. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Culinary Arts II

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.

Culinary Arts II LAB

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.

Culinary Arts III

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.

Culinary Arts III LAB

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.

Culinary Arts Advanced Studies

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.

Hospitality and Tourism I

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.

Hospitality and Tourism II

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.

Hospitality and Tourism II LAB

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.

Hospitality and Tourism III

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.

Hospitality and Tourism III LAB

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.

Hospitality and Tourism Advanced Studies

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.

NAF-Customer Service

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.

NAF-Geography for Tourism

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.

NAF-Hospitality Marketing

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.

NAF-Principles of Hospitality and Tourism

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.

NAF-Sports, Entertainment and Event Planning

Prerequisite: Must complete one or more Level 2 (L2) 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.

NAF-Sustainable Tourism

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 – Hospitality and Tourism

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 -

Cosmetology I

Schools must be approved by the governing State Agency in order to offer this course

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.

Cosmetology II

Schools must be approved by the governing State Agency in order to offer this course

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.

Family and Consumer Sciences

Prerequisite: Fashion Design and Construction I & Foods and Nutrition I & Human Development 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, as well as related occupations. 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.

Foods and Nutrition I

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.

Foods and Nutrition II

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.

Foods and Nutrition III

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.

Foods and Nutrition Advanced Studies

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.

Human Development I

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.

Human Development II

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.

Human Development III

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.

Human Development Advanced Studies

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.

Principles of Cosmetology

Schools must be approved by the governing State Agency in order to offer this course

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 – Human Services

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.

COURSE DATA INFORMATION

- EDUCATION & TRAINING -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Early Childhood Education I	EARLY CHILD I	L1	13.1210	1	M	19153
Early Childhood Education II	EARLY CHILD II	L2	13.1210	1	M	19153
Early Childhood Education II LAB	EARLY CHILD II L	L2L	13.1210	1	M	19153
Early Childhood Education III	EARLY CHILD III	L3C	13.1210	1	M	19153
Early Childhood Education III LAB	EARLY CHILD III L	L3L	13.1210	1	M	19153
Early Childhood Education Advanced Studies	EARLY CHILD AS	AS	13.1210	1	M	19153
Teaching and Training I	TEACH TRNG I	L1	13.1206	1	M	19151
Teaching and Training II	TEACH TRNG II	L2	13.1206	1	M	19151
Teaching and Training III	TEACH TRNG III	L3C	13.1206	1	M	19151
Teaching and Training Advanced Studies	TEACH TRNG AS	AS	13.1206	1	M	19151
Work Experience - Education and Training	WORK EXPER EDUC	WK	99.0005	1	M	19198

- HOSPITALITY & TOURISM -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Baking and Pastry I	BAKING I	L2	12.0501	1	N	16056
Baking and Pastry I LAB	BAKING I L	L2L	12.0501	1	N	16056
Baking and Pastry II	BAKING II	L3C	12.0501	1	N	16056
Baking and Pastry II LAB	BAKING II L	L3L	12.0501	1	N	16056
Baking and Pastry Advanced Studies	BAKING AS	AS	12.0501	1	N	16056
Culinary Arts I	CUL ARTS I	L1	12.0503	1	F	16053
Culinary Arts II	CUL ARTS II	L2	12.0503	1	F	16053
Culinary Arts II LAB	CUL ARTS II L	L2L	12.0503	1	F	16053
Culinary Arts III	CUL ARTS III	L3C	12.0503	1	F	16053
Culinary Arts III LAB	CUL ARTS III L	L3L	12.0503	1	F	16053
Culinary Arts Advanced Studies	CUL ARTS AS	AS	12.0503	1	F	16053
Hospitality and Tourism I	HOSPLTY TOUR I	L1	52.0901	1	N	16001
Hospitality and Tourism II	HOSPLTY TOUR II	L2	52.0901	1	N	16001
Hospitality and Tourism II LAB	HOSPLTY TOUR II L	L2L	52.0901	1	N	16001
Hospitality and Tourism III	HOSPLTY TOUR III	L3C	52.0901	1	N	16001
Hospitality and Tourism III LAB	HOSPLTY TOUR III L	L3L	52.0901	1	N	16001
Hospitality and Tourism Advanced Studies	HOSPLTY TOUR AS	AS	52.0901	1	N	16001

- HOSPITALITY & TOURISM -
(CONTINUED)

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
NAF-Customer Service	NAF CUSTOMER SERV	L1	52.0207	0.5	N	16001
NAF-Geography for Tourism	NAF GEO TOURISM	L2	52.1906	0.5	N	16001
NAF-Hospitality Marketing	NAF HOSPLTY MKTG	L3C	52.1910	0.5	N	16001
NAF-Principles of Hospitality and Tourism	NAF PRIN HOSPLTY	L1	52.0901	0.5	N	16001
NAF-Sports, Entertainment and Event Planning	NAF EVENT PLANNING	L3C	52.0907	0.5	F	16001
NAF-Sustainable Tourism	NAF SUSTAIN TOUR	L2	52.1999	0.5	N	16001
Work Experience - Hospitality and Tourism	WORK EXPER HOSP	WK	99.0009	1	N	16198

- HUMAN SERVICES -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Cosmetology I	COSMO I	L2	12.0401	6	M	19101
Cosmetology II	COSMO II	L3C	12.0401	6	M	19101
Family and Consumer Sciences	FACS	L4C	19.0101	1	N	19251
Foods and Nutrition I	FOODS I	L1	19.0501	1	M	19252
Foods and Nutrition II	FOODS II	L2	19.0501	1	M	19252
Foods and Nutrition III	FOODS III	L3C	19.0501	1	M	19252
Foods and Nutrition Advanced Studies	FOODS AS	AS	19.0501	1	M	19252
Human Development I	HUMAN DEVLOP I	L1	19.0701	1	N	19261
Human Development II	HUMAN DEVLOP II	L2	19.0701	1	N	19261
Human Development III	HUMAN DEVLOP III	L3C	19.0701	1	N	19261
Human Development Advanced Studies	HUMAN DEVLOP AS	AS	19.0701	1	N	19261
Principles of Cosmetology	PRIN COSMO	L1	12.0401	1	M	19101
Work Experience – Human Services	WORK EXPER HU SERV	WK	99.0010	1	M	19998

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HEALTH SCIENCE
&
PUBLIC SAFETY

CAREER CLUSTERS & PROGRAM ALIGNMENT

- GOVERNMENT & PUBLIC ADMINISTRATION -

- Military Science

- HEALTH SCIENCE -

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

- LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY -

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

PROGRAM DESCRIPTIONS

- GOVERNMENT & PUBLIC ADMINISTRATION -

Military Science

The Military Science program provides students with the knowledge and skills in basic first aid, global awareness, problem solving, career exploration, leadership styles, wellness, patriotism, and leadership traits.

- HEALTH SCIENCE -

Biomedical

The Biomedical program provides students with the knowledge and skills in inquiry science, disease exploration, human body systems, and biomedical engineering. Areas of study include infectious and genetic diseases, molecular biology, oncology, metabolism, homeostasis, and exercise physiology.

Community Health Science

The Community Health Science program provides students with the knowledge and skills in inquiry science, disease exploration, anatomy and physiology, public and community health. Areas of study include epidemiology, pathophysiology, health literacy, biostatistics and environmental risks.

Dental Science

The Dental Science program 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.

Emergency Medical Technician

Schools must be approved by the governing State Agency in order to offer this program

The Emergency Medical Technician program provides students with an introduction to emergency medical technician techniques and processes. The program provides the primary skills and knowledge for the pre-hospital emergency medical provider. It includes areas of study in legalities, trauma and medical assessment, documentation, patient care, and basic life support.

Health Information Management

The Health Information Management program 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 medical office staff; utilizing a computer program to maintain patient files.

Medical Assisting

The Medical Assisting program provides students with the knowledge and skills required for entry level into administrative and clinical medical assisting. Areas of study include diversity, awareness, pharmacology, health information management, and laboratory procedures.

Nursing Assistant

Schools must be approved by the governing State Agency in order to offer this program

The Nursing Assistant program provides students with the knowledge and skills required for entry into the healthcare field. Students completing the didactic and clinical practicum are eligible for the Nevada State of Nursing Certifying exam as a Nursing Assistant.

Pharmacy Practice

The Pharmacy Practice program provides students with an introduction to practices and fundamentals of pharmacology. Areas of study include pharmacy, calculations, routes, inventory management, and factors affecting drug activity.

Respiratory Science

The Respiratory Science program provides students with the principles of respiratory therapy. Areas of emphasis include medical terminology, medical math, industry requirements, basic techniques, and procedures.

Sports Medicine

The Sports Medicine program provides students with an introduction to sports medicine techniques and processes. The program provides the primary skills and knowledge in athletic training, and sports medicine related fields. The areas of study include physical fitness, human anatomy and physiology, injury evaluation and prevention, and rehabilitation.

- LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY -

Criminal Justice

The Criminal Justice program provides students with 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 local, state and federal courts. Areas of study include civil law, criminal law, legal and ethical issues, corrections, policing and the government.

Emergency Telecommunications

The Emergency Telecommunications program 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.

Fire Science

Schools must be approved by the governing State Agency in order to offer this program

The Fire Science program provides students with an introduction to fire science techniques and processes. The program provides the skills and knowledge 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.

Forensic Science

The Forensic Science program introduces the principles and procedures employed in criminal and civil investigations. Areas of studies include scientific endeavors such as medicine, pathology, psychology, geology, entomology, fingerprint technology, chemistry, and biology. Emphasis will be put on gathering, analyzing, and interpreting physical evidence, using modern laboratory technologies and procedures.

Law Enforcement

The Law Enforcement program provides students with an introduction to law enforcement techniques and processes. Areas of study include basic functions of a law enforcement officer such as: written policies, quality control, court system, law, interrogations, use of force, and emergency management.

PROGRAM COURSE SEQUENCES

- GOVERNMENT & PUBLIC ADMINISTRATION -

Program Name	Course Sequence	State Skill Standards*
Military Science	**Core Course Sequence** Military Science I Military Science II Military Science III Military Science IV	Military Science

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

- HEALTH SCIENCE -

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

* 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 -
(CONTINUED)

Program Name	Course Sequence	State Skill Standards*
Health Information Management	**Core Course Sequence** Health Science I Health Information Management I Health Information Management II **Complementary Course(s)** Health Information Management Advanced Studies	Health Science & Health Information Management
Medical Assisting	**Core Course Sequence** Health Science I Health Science II - *or* - Medical Terminology Medical Assisting **Complementary Course(s)** Medical Assisting LAB ** Medical Assisting Advanced Studies	Health Science & Medical Assisting
Nursing Assistant	**Core Course Sequence** Health Science I Health Science II - *or* - Medical Terminology Nursing Assistant **Complementary Course(s)** Nursing Assistant LAB **	Health Science & Nursing Assistant
Pharmacy Practice	**Core Course Sequence** Health Science I Health Science II - *or* - Medical Terminology Pharmacy Practice **Complementary Course(s)** Pharmacy Practice Advanced Studies	Health Science & Pharmacy Practice
Respiratory Science	**Core Course Sequence** Respiratory Science I Respiratory Science II Respiratory Science III **Complementary Course(s)** Respiratory Science Advanced Studies	Respiratory Science
Sports Medicine	**Core Course Sequence** Health Science I Sports Medicine I Sports Medicine II **Complementary Course(s)** Health Science II Sports Medicine Advanced Studies	Health Science & 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** Criminal Justice I - *or* - Foundations of Public Safety Criminal Justice II Criminal Justice III **Complementary Course(s)** Criminal Justice Advanced Studies	Criminal Justice
Emergency Telecommunications	**Core Course Sequence** Emergency Telecommunications I Emergency Telecommunications II **Complementary Course(s)** Foundations of Public Safety Emergency Telecommunications II LAB **	Emergency Telecommunications
Fire Science	**Core Course Sequence** Fire Science I Fire Science II Entry Level Firefighting **Complementary Course(s)** Fire Science Advanced Studies	Fire Science
Forensic Science	**Core Course Sequence** Forensic Science I - *or* - Foundations of Public Safety Forensic Science II Forensic Science III **Complementary Course(s)** Forensic Photography Forensic Science Advanced Studies	Forensic Science
Law Enforcement	**Core Course Sequence** Law Enforcement I - *or* - Foundations of Public Safety Law Enforcement II Law Enforcement III **Complementary Course(s)** 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.

COURSE DESCRIPTIONS

- GOVERNMENT & PUBLIC ADMINISTRATION -

Military Science I

Prerequisite: None

This course introduces students to the fundamentals of Military Science. Areas of emphasis include introduction to JROTC, foundation of leadership, citizenship, wellness, physical fitness, and first aid. Students will also gain experience in specific branch topics related to their program. (Air Force, Army, Marine Corps or Navy)

Military Science II

Prerequisite: Military Science I

This course is a continuation of Military Science I. This course provides military science students the ability to further their skills and knowledge levels. Areas of emphasis include personal growth, basic leadership, military careers, military branch core values and communications. Students will also gain experience in specific branch topics related to their program. (Air Force, Army, Marine Corps or Navy) The appropriate use of technology and industry-standard equipment is an integral part of this course.

Military Science III

Prerequisite: Military Science II

This course is continuation of Military Science II. This course provides an in-depth experience that applies the processes, concepts, and principles as described in the classroom instruction. Areas of emphasis include intermediate leadership and financial planning. Students will also gain experience in specific branch topics related to their program. (Air Force, Army, Marine Corps or Navy) The appropriate use of technology and industry-standard equipment is an integral part of this course.

Military Science IV

Prerequisite: Military Science III

This course is a continuation of Military Science III. This course provides advanced military science students the ability to further their skills and knowledge levels. Areas of emphasis include advanced leadership, management and specific branch topics. 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.

- HEALTH SCIENCE -

Biomedical I

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.

Biomedical II

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 homeostasis. 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.

Biomedical III

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.

Biomedical Advanced Studies

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.

Community Health Science

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. The course is designed to provide students with knowledge and skills required for entry into the healthcare field area of study that includes personal health, public health biology, social and behavioral health, environmental health, epidemiology, biostatistics, social justice, communities and career development. 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.

Community Health Science Advanced Studies

Prerequisite: Community Health 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.

Dental Science I

Prerequisite: None

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.

Dental Science II

Prerequisite: Dental Science I

This course is a continuation of Dental Science I. This course allows intermediate dental science students to develop their knowledge and skills learned in Dental Science 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.

Dental Science III

Prerequisite: Dental Science II

This course is a continuation of Dental Science II. This course provides advanced dental science students with instruction in advanced techniques and processes. The students will continue to develop all skills learned in Dental Science II. 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.

Dental Science Advanced Studies

Prerequisite: Dental 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.

Emergency Medical Services

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.

Emergency Medical Technician

Schools must be approved by the governing State Agency in order to offer this course

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.

Emergency Medical Technician LAB

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.

Health Information Management I

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.

Health Information Management II

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.

Health Information Management Advanced Studies

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.

Health Professions

Prerequisite: None

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.

Health Professions LAB

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.

Health Science I

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.

Health Science II

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.

Medical Assisting

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.

Medical Assisting LAB

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.

Medical Assisting Advanced Studies

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.

Medical Terminology

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.

Nursing Assistant

Schools must be approved by the governing State Agency in order to offer this course

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.

Nursing Assistant LAB

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.

Pharmacy Practice

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.

Pharmacy Practice Advanced Studies

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.

PLTW-Biomedical Innovation

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.

PLTW-Human Body Systems

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.

PLTW-Medical Interventions

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.

PLTW-Principles of Biomedical Sciences

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.

Respiratory Science I

Prerequisite: None

This course provides students with the principles of respiratory science. Areas of emphasis include medical terminology, communication in the healthcare setting, anatomy and physiology, medical math, and applied respiratory science. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Respiratory Science II

Prerequisite: Respiratory Science I

This course is a continuation of Respiratory Science I. This course provides intermediate respiratory science students with instruction in cardiopulmonary anatomy and physiology, roles of the healthcare team, legal and ethical responsibilities, and practices in patient care. The students will continue to develop all skills learned in Respiratory Science I. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Respiratory Science III

Prerequisite: Respiratory Science II

This course is a continuation of Respiratory Science II. This course provides advanced respiratory science students with instruction in patient assessment, technical skills, population proficiencies, and evidence based medicine. The students will continue to develop all skills learned in Respiratory Science 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.

Respiratory Science Advanced Studies

Prerequisite: Respiratory 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.

Sports Medicine I

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.

Sports Medicine II

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.

Sports Medicine Advanced Studies

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 – Health Science

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 -

Criminal Justice I

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.

Criminal Justice II

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.

Criminal Justice III

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.

Criminal Justice Advanced Studies

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.

Emergency Telecommunications I

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.

Emergency Telecommunications II

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.

Emergency Telecommunications II LAB

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.

Entry Level Firefighting

Schools must be approved by the governing State Agency in order to offer this course

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.

Fire Science I

Schools must be approved by the governing State Agency in order to offer this course

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.

Fire Science II

Schools must be approved by the governing State Agency in order to offer this course

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.

Fire Science Advanced Studies

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.

Forensic Photography

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.

Forensic Science I

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.

Forensic Science II

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.

Forensic Science III

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.

Forensic Science Advanced Studies

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.

Foundations of Public Safety

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.

Law Enforcement I

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.

Law Enforcement II

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.

Law Enforcement III

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.

Law Enforcement Advanced Studies

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 – Law Public Safety Corrections and Security

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.

COURSE DATA INFORMATION

- GOVERNMENT & PUBLIC ADMINISTRATION -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Military Science I	MIL SCI I	L1	28.0503	1	N	09002
Military Science II	MIL SCI II	L2	28.0503	1	N	09002
Military Science III	MIL SCI III	L3	28.0503	1	N	09002
Military Science IV	MIL SCI IV	L4C	28.0503	1	N	09002

- HEALTH SCIENCE -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Biomedical I	BIOMED I	L1	26.0102	1	N	14255
Biomedical II	BIOMED II	L2	26.0102	1	N	14255
Biomedical III	BIOMED III	L3C	26.0102	1	N	14255
Biomedical Advanced Studies	BIOMED AS	AS	26.0102	1	N	14255
Community Health Science	CMTY HLTH SCI	L3C	51.2208	1	N	08053
Community Health Science Advanced Studies	CMTY HLTH SCI AS	AS	51.2208	1	N	08053
Dental Science I	DENTAL SCI I	L1	51.0601	1	M	14054
Dental Science II	DENTAL SCI II	L2	51.0601	1	M	14054
Dental Science III	DENTAL SCI III	L3C	51.0601	1	M	14054
Dental Assisting Advanced Studies	DENTAL SCI AS	AS	51.0601	1	M	14054
Emergency Medical Services	EMER MED SERVICES	L2	51.0810	1	N	14055
Emergency Medical Technician	EMER MED TECH	L3C	51.0904	1	N	14055
Emergency Medical Technician LAB	EMER MED TECH L	L3L	51.0904	1	N	14055
Health Information Management I	HLTH INFO MGMT I	L2	51.0707	1	M	14157
Health Information Management II	HLTH INFO MGMT II	L3C	51.0707	1	M	14157
Health Information Management Advanced Studies	HLTH INFO MGMT AS	AS	51.0707	1	M	14157
Health Professions	HLTH PROFESSIONS	L3	51.9999	1	N	14002
Health Professions LAB	HLTH PROFESSIONS L	L3L	51.9999	1	N	14002
Health Science I	HEALTH SCI I	L1	51.0000	1	N	14251
Health Science II	HEALTH SCI II	L2	51.0000	1	N	14251
Medical Assisting	MEDICAL ASST	L3C	51.0801	1	M	14151
Medical Assisting LAB	MEDICAL ASST L	L3L	51.0801	1	M	14151
Medical Assisting Advanced Studies	MEDICAL ASST AS	AS	51.0801	1	M	14151
Medical Terminology	MEDICAL TERM	L2	51.0899	1	N	14154
Nursing Assistant	NURSING ASST	L3C	51.3902	1	M	14051
Nursing Assistant LAB	NURSING ASST L	L3L	51.3902	1	M	14051
Pharmacy Practice	PHARMACY PRACT	L3C	51.0805	1	M	14152
Pharmacy Practice Advanced Studies	PHARMACY PRACT AS	AS	51.0805	1	M	14152

- HEALTH SCIENCE -
(CONTINUED)

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
PLTW-Biomedical Innovation	PLTW BIOMED INNOV	AS	26.0102	1	N	03070
PLTW-Human Body Systems	PLTW HUM BODY SYS	L2	26.0102	1	N	03067
PLTW-Medical Interventions	PLTW MED INTERVENT	L3C	26.0102	1	N	03068
PLTW-Principles of Biomedical Sciences	PLTW PRIN BIOMED	L1	26.0102	1	N	03066
Respiratory Science I	RESP SCI I	L1	51.0908	1	N	14061
Respiratory Science II	RESP SCI II	L2	51.0908	1	N	14061
Respiratory Science III	RESP SCI III	L3C	51.0908	1	N	14061
Respiratory Science Advanced Studies	RESP SCI AS	AS	51.0908	1	N	14061
Sports Medicine I	SPORTS MED I	L2	51.0913	1	N	14062
Sports Medicine II	SPORTS MED II	L3C	51.0913	1	N	14062
Sports Medicine Advanced Studies	SPORTS MED AS	AS	51.0913	1	N	14062
Work Experience - Health Science	WORK EXPER HEALTH	WK	99.0008	1	N	14298

- LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Criminal Justice I	CRIMINAL JUST I	L1	43.0104	1	F	15051
Criminal Justice II	CRIMINAL JUST II	L2	43.0104	1	F	15051
Criminal Justice III	CRIMINAL JUST III	L3C	43.0104	1	F	15051
Criminal Justice Advanced Studies	CRIMINAL JUST AS	AS	43.0104	1	F	15051
Emergency Telecommunications I	EMER TELECOMM I	L1	43.0399	1	N	15104
Emergency Telecommunications II	EMER TELECOMM II	L2C	43.0399	1	N	15104
Emergency Telecommunications II LAB	EMER TELECOMM II L	L2L	43.0399	1	N	15104
Entry Level Firefighting	ENTRY LEVEL FIRE	L3C	43.0203	1	F	15152
Fire Science I	FIRE SCI I	L1	43.0203	1	F	15151
Fire Science II	FIRE SCI II	L2	43.0203	1	F	15151
Fire Science Advanced Studies	FIRE SCI AS	AS	43.0203	1	F	15151
Forensic Photography	FORENSIC PHOTO	L2	43.0199	1	N	15056
Forensic Science I	FORENSIC SCI I	L1	43.0106	1	N	15055
Forensic Science II	FORENSIC SCI II	L2	43.0106	1	N	15055
Forensic Science III	FORENSIC SCI III	L3C	43.0106	1	N	15055
Forensic Science Advanced Studies	FORENSIC SCI AS	AS	43.0106	1	N	15055
Foundations of Public Safety	FOUN PUBLIC SAFETY	L1	43.9999	1	N	15101
Law Enforcement I	LAW ENFORCE I	L1	43.0107	1	F	15054
Law Enforcement II	LAW ENFORCE II	L2	43.0107	1	F	15054
Law Enforcement III	LAW ENFORCE III	L3C	43.0107	1	F	15054
Law Enforcement Advanced Studies	LAW ENFORCE AS	AS	43.0107	1	F	15054
Work Experience – Law Public Safety Corrections and Security	WORK EXPER LAW	WK	99.0012	1	F	15998

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
- Cybersecurity
- Digital Game Development
- IT – Networking
- Web Design and Development

PROGRAM DESCRIPTIONS

- ARTS, A/V TECHNOLOGY & COMMUNICATIONS -

Fashion, Textiles & Design

The Fashion, Textiles, and Design program provides students with an introduction to the fundamentals of fashion, design, and construction. Areas of study include individual image, psychological and social aspects of clothing, wardrobe planning, consumer decision-making, pattern and textile selection, construction techniques, handling and care techniques, the use and care of sewing equipment, clothing repair, and fashion-related occupations.

Graphic Design

The Graphic Design program provides students with an introduction of the principles of creating graphic works. Areas of study include elements and principles of design, production aspects, legal and ethical issues, and portfolio development.

Interior Design

The Interior Design program provides students with an introduction to the fundamentals of interior design. Areas of study include elements and principles of design and their application in residential and commercial design; historical, cultural and technological influences; architectural styles and housing types; fundamentals of house plans, home construction and house systems; green, sustainable, and ecological considerations in design; furniture styles, construction, and arrangement; financial considerations; and careers and professional practices.

Photography

The Photography program provides students with the principles of commercial photography. Areas of study include camera and lens operation, lighting, image capture and digital image editing and processing. Students learn the history of photography, legal and ethical issues related to the industry, and develop a portfolio.

Radio Production

The Radio Production program provides students with the concepts and skills needed for radio broadcast production. Students learn on-air production techniques, news writing, sound gathering, and production operations through the platform of an internet radio station. Marketing and station promotion are also learned.

Theatre Technology

The Theatre Technology program instructs students in the craft and technical skills of theatrical production. Instruction includes theatre safety, lighting, scenic design and construction, and stage management.

Video Production

The Video Production program provides students instruction in the various video production processes and techniques. Areas of study include camera operation, On-Air program production, creative works, and video editing. Students will produce original video and live broadcast productions. Emphasis is placed on writing, pre/post production, editing techniques, and studio and engineering procedures.

- *INFORMATION TECHNOLOGY* -

Animation

The Animation program provides students with the principles of 2D and 3D animation and graphics. Areas of study include storyboarding, modeling, background development, and the production process.

Computer Science

The Computer Science program provides students with the principles of computer science and programming. Areas of study include methodology, algorithms, data structures and object-oriented programming. Java and C++ are the primary languages taught.

Cybersecurity

The Cybersecurity program provides students with knowledge and skills in computer maintenance and repair, the cybersecurity lifecycle, incident handling, and networking. Successful students will be prepared to take certification exams for CompTIA's A+ and Networking +, the gateway certifications for careers in IT and Cybersecurity.

Digital Game Development

The Digital Game Development program provides students with the principles of game mechanics. Areas of study include programming, story and character development, and artistic theory and concepts to develop a game.

IT-Networking

The Information Technology-Networking program provides students with concepts in computer networking. Areas of study include safety procedures, network systems hardware, network protocols, and constructing and maintaining a network.

Web Design & Development

The Web Design and Development program provides students with concepts to develop and maintain websites. Areas of study include content development, backend programming, design and layout theories, and user interface.

PROGRAM COURSE SEQUENCES

- ARTS, A/V TECHNOLOGY & COMMUNICATIONS -

Program Name	Course Sequence	State Skill Standards*
Fashion, Textiles and Design	**Core Course Sequence** Fashion Design and Construction I Fashion Design and Construction II Fashion Design and Construction III **Complementary Course(s)** Pattern Drafting Fashion Design and Construction Advanced Studies	Fashion, Textiles and Design
Graphic Design	**Core Course Sequence** Graphic Design I Graphic Design II Graphic Design III **Complementary Course(s)** Graphic Design II LAB ** Graphic Design III LAB ** Graphic Design Advanced Studies	Graphic Design
Interior Design	**Core Course Sequence** Interior Design I Interior Design II Interior Design III **Complementary Course(s)** Interior Design II LAB ** Interior Design III LAB ** Interior Design Advanced Studies	Interior Design
Photography	**Core Course Sequence** Photography I Photography II Photography III **Complementary Course(s)** Photography Advanced Studies	Photography
Radio Production	**Core Course Sequence** Radio Production I Radio Production II Radio Production III **Complementary Course(s)** Radio Production Advanced Studies	Radio Production
Theatre Technology	**Core Course Sequence** Theatre Technology I Theatre Technology II Theatre Technology III **Complementary Course(s)** Theatre Technology Advanced Studies	Theatre 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.

- ARTS, A/V TECHNOLOGY & COMMUNICATIONS - (CONTINUED)

Program Name	Course Sequence	State Skill Standards*
Video Production	**Core Course Sequence** Video Production I Video Production II Video Production III **Complementary Course(s)** Video Production II LAB ** Video Production III LAB ** 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** Animation I Animation II Animation III **Complementary Course(s)** Animation II LAB ** Animation III LAB ** Animation Advanced Studies	Animation
Computer Science	**Core Course Sequence** Computer Science I - *or* - AP Computer Science Principles Computer Science II Computer Science III - *or* - AP Computer Science A **Complementary Course(s)** Computer Science II LAB ** Computer Science III LAB ** Computer Science Advanced Studies	Computer Science
Cybersecurity	**Core Course Sequence** Cybersecurity I Cybersecurity II Cybersecurity III **Complementary Course(s)** Cybersecurity II LAB ** Cybersecurity III LAB ** Cybersecurity Advanced Studies	Cybersecurity
Digital Game Development	**Core Course Sequence** Digital Game Development I Digital Game Development II Digital Game Development III **Complementary Course(s)** Digital Game Development II LAB ** Digital Game Development III LAB ** Digital Game Development Advanced Studies	Digital Game 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.

- INFORMATION TECHNOLOGY -
(CONTINUED)

Program Name	Course Sequence	State Skill Standards*
Information Technology Networking	**Core Course Sequence** IT Networking I IT Networking II IT Networking III **Complementary Course(s)** IT Networking Advanced Studies	Information Technology Networking
Cisco Networking Academy	**Core Course Sequence** Cisco IT Essentials/Intro to Cybersecurity CCNA I Introduction to Networking CCNA II Routing and Switching Essentials **Complementary Course(s)** IT Networking Advanced Studies	Information Technology Networking
National Academy Foundation Academy of Information Technology	**Core Course Sequence** NAF-Graphic Design / NAF-Web Design NAF-Principles of IT / NAF-Principles of IT-IC3 - *or* - AP Computer Science Principles NAF-Computer Networking / NAF-Computer Systems **Complementary Course(s)** NAF-Database Design NAF-Digital Video Production NAF-Introduction to Programing	Information Technology Service and Support
Web Design and Development	**Core Course Sequence** Web Design and Development I Web Design and Development II Web Design and Development III **Complementary Course(s)** Web Design and Development II LAB ** Web Design and Development III LAB ** 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 & COMMUNICATIONS -

Fashion Design and Construction I

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.

Fashion Design and Construction II

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.

Fashion Design and Construction III

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.

Fashion Design and Construction Advanced Studies

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.

Graphic Design I

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.

Graphic Design II

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.

Graphic Design II LAB

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.

Graphic Design III

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.

Graphic Design III LAB

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.

Graphic Design Advanced Studies

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.

Interior Design I

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.

Interior Design II

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.

Interior Design II LAB

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.

Interior Design III

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.

Interior Design III LAB

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.

Interior Design Advanced Studies

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.

Pattern Drafting

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.

Photography I

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.

Photography II

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.

Photography III

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.

Photography Advanced Studies

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.

Radio Production I

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.

Radio Production II

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.

Radio Production III

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.

Radio Production Advanced Studies

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.

Theatre Technology I

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.

Theatre Technology II

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.

Theatre Technology III

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.

Theatre Technology Advanced Studies

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.

Video Production I

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.

Video Production II

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.

Video Production II LAB

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.

Video Production III

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.

Video Production III LAB

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.

Video Production Advanced Studies

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 – Arts A/V Technology and Communication

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* -

Animation I

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.

Animation II

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.

Animation II LAB

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.

Animation III

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.

Animation III LAB

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.

Animation Advanced Studies

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.

AP Computer Science A

Prerequisite: Computer Science II

This course follows The College Board Advanced Placement curriculum and prepares students for the AP Computer Science exam. This course provides advanced computer science students with instruction in advanced topics that include problem solving, design strategies and methodologies, data structures, algorithms, analysis of potential solutions and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. Students will learn to write, run, and debug solutions in the Java programming language, utilizing standard Java library classes. 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.

AP Computer Science Principles

Prerequisite: None

This course follows The College Board Advanced Placement curriculum and prepares students for the AP Computer Science Principles exam. This course will introduce students to the essential ideas of computer science and show how computing and technology can influence the world. This course focuses on technology and programing as a means to solve computational problems and find creative solutions. Students will creatively address real-world issues and concerns while using the same processes and tools as artists, writers, computer scientists, and engineers to bring ideas to life. The appropriate use of technology and industry-standard equipment is an integral part of this course.

CISCO-IT Essentials

Prerequisite: None

This course introduces students to the fundamentals of computer hardware and software, mobile devices, security and networking concepts, and the responsibilities of an IT professional. Students will be able to describe the internal components of a computer and assemble a computer system. Students will be able to install and understand operating systems, Connect via a networked environment and troubleshoot using system tools and diagnostic software.

CISCO-Introduction to Cybersecurity

Prerequisite: CISCO-IT Essentials

This course explores the broad topic of cybersecurity including procedures to implement data confidentiality, integrity, availability and security controls on networks, servers and applications. Students will understand security principles and how to protect personal data and privacy online.

CISCO-CCNA I Introduction to Networking

Prerequisite: CISCO-IT Essentials/CISCO-Introduction to Cybersecurity

This course covers basic networking concepts including networking architecture, structure, and functions; principles and structure of IP addressing; router hardware; network configurations; and the fundamentals of Ethernet concepts.

CISCO-CCNA II Routing and Switching Essentials

Prerequisite: CISCO-CCNA I Introduction to Networking

This course covers the architecture, components, and operations of routers and switches in a network. Students will learn how to configure a router and a switch for basic functionality. Configuration implementation of monitoring tools is also addressed. Upon successful completion of this program, students will be prepared for CompTIA's A+ and the Cisco Certified Entry Networking Technician (CCENT) certification exams.

Computer Science I

Prerequisite: None

This course will introduce students to the essential ideas of computer science and show how computing and technology can influence the world. This course focuses on technology and programing as a means to solve computational problems and find creative solutions. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Computer Science II

Prerequisite: Computer Science I or AP Computer Science Principles

This course is a continuation of Computer Science I or AP Computer Science Principles. This course provides intermediate computer science students with instruction in advanced techniques and processes, particularly as it relates to the language of Java. 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.

Computer Science II LAB

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.

Computer Science III

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.

Computer Science III LAB

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.

Computer Science Advanced Studies

Prerequisite: Computer Science III or AP Computer Science Principles

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.

Cybersecurity I

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 CompTIA's A+ industry certification.

Cybersecurity II

Prerequisite: Cybersecurity I

This course is a continuation of Cybersecurity I. This course provides intermediate cybersecurity students with computer forensics and incident handling. Students will learn to develop and execute an incident response plan, document an incident, determine investigative objectives, describe methods to trace offenders and use appropriate tools for computer forensics. Methods for deciphering encrypted data and a working knowledge of hard drive configuration are also covered. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Cybersecurity III

Prerequisite: Cybersecurity II

This course is a continuation of Cybersecurity II. This course provides advanced cybersecurity students with the general theory of switching and routing, including virtual local-area networks (VLAN), interVLAN routing, wireless local area networks (LAN), and network troubleshooting. Upon successful completion of this course, students will be prepared for CompTIA's Networking + certification exams. 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.

Cybersecurity Advanced Studies

Prerequisite: Cybersecurity 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.

Digital Game Development I

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.

Digital Game Development II

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.

Digital Game Development II LAB

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.

Digital Game Development III

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.

Digital Game Development III LAB

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.

Digital Game Development Advanced Studies

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.

IT Networking I

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.

IT Networking II

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.

IT Networking III

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.

IT Networking Advanced Studies

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.

NAF-Computer Networking

Prerequisite: Must complete two or more Level 2 (L2) NAF courses or AP Computer Science Principles

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.

NAF-Computer Systems

Prerequisite: Must complete two or more Level 2 (L2) NAF courses or AP Computer Science Principles

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.

NAF-Database Design

Prerequisite: Must complete two or more Level 2 (L2) NAF courses or AP Computer Science Principles

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.

NAF-Digital Video Production

Prerequisite: None

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.

NAF-Graphic Design

Prerequisite: None

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.

NAF-Introduction to Programming

Prerequisite: Must complete two or more Level 2 (L2) NAF courses or AP Computer Science Principles

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.

NAF-Principles of Information Technology

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

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.

NAF-Principles of Information Technology IC3

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

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

The IC3 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 IC3 Certification exam. It is geared to the Global Standard 3 (August, 2009) version of the IC3 exam, which includes Computing Fundamentals, Key Applications, and Living Online. This course extension assumes that students have successfully completed Principles of Information Technology.

NAF-Web Design

Prerequisite: None

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.

Web Design and Development I

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.

Web Design and Development II

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.

Web Design and Development II LAB

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.

Web Design and Development III

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.

Web Design and Development III LAB

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.

Web Design and Development Advanced Studies

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 – Information Technology

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.

COURSE DATA INFORMATION

- ARTS, A/V TECHNOLOGY & COMMUNICATIONS -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Fashion Design and Construction I	FASHION CONST I	L1	50.0407	1	N	05190
Fashion Design and Construction II	FASHION CONST II	L2	50.0407	1	N	05190
Fashion Design and Construction III	FASHION CONST III	L3C	50.0407	1	N	05190
Fashion Design and Construction Advanced Studies	FASHION CONST AS	AS	50.0407	1	N	05190
Graphic Design I	GRAPHIC DESG I	L1	50.0409	1	N	11155
Graphic Design II	GRAPHIC DESG II	L2	50.0409	1	N	11155
Graphic Design II LAB	GRAPHIC DESG II L	L2L	50.0409	1	N	11155
Graphic Design III	GRAPHIC DESG III	L3C	50.0409	1	N	11155
Graphic Design III LAB	GRAPHIC DESG III L	L3L	50.0409	1	N	11155
Graphic Design Advanced Studies	GRAPHIC DESG AS	AS	50.0409	1	N	11155
Interior Design I	INT DESIGN I	L1	50.0408	1	N	05193
Interior Design II	INT DESIGN II	L2	50.0408	1	N	05193
Interior Design II LAB	INT DESIGN II L	L2L	50.0408	1	N	05193
Interior Design III	INT DESIGN III	L3C	50.0408	1	N	05193
Interior Design III LAB	INT DESIGN III L	L3L	50.0408	1	N	05193
Interior Design Advanced Studies	INT DESIGN AS	AS	50.0408	1	N	05193
Pattern Drafting	PAT DRAFTING	L3	50.0407	1	N	05164
Photography I	PHOTO I	L1	50.0406	1	N	05167
Photography II	PHOTO II	L2	50.0406	1	N	05167
Photography III	PHOTO III	L3C	50.0406	1	N	05167
Photography Advanced Studies	PHOTO AS	AS	50.0406	1	N	05167
Radio Production I	RADIO PROD I	L1	10.0202	1	F	11107
Radio Production II	RADIO PROD II	L2	10.0202	1	F	11107
Radio Production III	RADIO PROD III	L3C	10.0202	1	F	11107
Radio Production Advanced Studies	RADIO PROD AS	AS	10.0202	1	F	11107
Theatre Technology I	THEATRE TECH I	L1	50.0502	1	N	05056
Theatre Technology II	THEATRE TECH II	L2	50.0502	1	N	05056
Theatre Technology III	THEATRE TECH III	L3C	50.0502	1	N	05056
Theatre Technology Advanced Studies	THEATRE TECH AS	AS	50.0502	1	N	05056
Video Production I	VIDEO PROD I	L1	50.0602	1	F	05168
Video Production II	VIDEO PROD II	L2	50.0602	1	F	05168
Video Production II LAB	VIDEO PROD II L	L2L	50.0602	1	F	05168
Video Production III	VIDEO PROD III	L3C	50.0602	1	F	05168
Video Production III LAB	VIDEO PROD III L	L3L	50.0602	1	F	05168
Video Production Advanced Studies	VIDEO PROD AS	AS	50.0602	1	F	05168
Work Experience - Arts A/V Technology and Communication	WORK EXPER TECH	WK	99.0003	1	N	10248

- INFORMATION TECHNOLOGY -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Animation I	ANIMATE I	L1	10.0304	1	N	05177
Animation II	ANIMATE II	L2	10.0304	1	N	05177
Animation II LAB	ANIMATE II L	L2L	10.0304	1	N	05177
Animation III	ANIMATE III	L3C	10.0304	1	N	05177
Animation III LAB	ANIMATE III L	L3L	10.0304	1	N	05177
Animation Advanced Studies	ANIMATE AS	AS	10.0304	1	N	05177
AP Computer Science A	AP COMPUTER SCI A	L3C	11.0701	1	N	10157
AP Computer Science Principles	AP COMP SCI PRIN	L1	11.0701	1	N	10019
Cisco IT Essentials	CISCO IT ESST	L1	11.1002	.5	N	10102
Cisco Introduction to Cybersecurity	CISCO IT CYBR	L1	11.1002	.5	N	10102
CCNA I Introduction to Networking	CISCO CCNA I	L2	11.1002	1	N	10102
CCNA II Routing and Switching Essentials	CISCO CCNA II	L3C	11.1002	1	N	10102
Computer Science I	COMPUTER SCI I	L1	11.0701	1	N	10011
Computer Science II	COMPUTER SCI II	L2	11.0701	1	N	10011
Computer Science II LAB	COMPUTER SCI II L	L2L	11.0701	1	N	10011
Computer Science III	COMPUTER SCI III	L3C	11.0701	1	N	10011
Computer Science III LAB	COMPUTER SCI III L	L3L	11.0701	1	N	10011
Computer Science Advanced Studies	COMPUTER SCI AS	AS	11.0701	1	N	10011
Cybersecurity I	CYBRSECU I	L1	52.2101	1	N	10108
Cybersecurity II	CYBRSECU II	L2	52.2101	1	N	10108
Cybersecurity III	CYBRSECU III	L3C	52.2101	1	N	10108
Cybersecurity Advanced Studies	CYBRSECU AS	AS	52.2101	1	N	10108
Digital Game Development I	DIG GAME DEV I	L1	50.0411	1	N	10205
Digital Game Development II	DIG GAME DEV II	L2	50.0411	1	N	10205
Digital Game Development II LAB	DIG GAME DEV II L	L2L	50.0411	1	N	10205
Digital Game Development III	DIG GAME DEV III	L3C	50.0411	1	N	10205
Digital Game Development III LAB	DIG GAME DEV III L	L3L	50.0411	1	N	10205
Digital Game Development Advanced Studies	DIG GAME DEV AS	AS	50.0411	1	N	10205
IT Networking I	IT NETWRKG I	L1	11.1002	1	F	10102
IT Networking II	IT NETWRKG II	L2	11.1002	1	F	10102
IT Networking III	IT NETWRKG III	L3C	11.1002	1	F	10102
IT Networking Advanced Studies	IT NETWRKG AS	AS	11.1002	1	F	10102

- INFORMATION TECHNOLOGY -
(CONTINUED)

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
NAF-Computer Networking	NAF COMP NETWORK	L3C	11.1002	0.5	F	10101
NAF-Computer Systems	NAF COMP SYSTEMS	L3C	11.0701	0.5	N	10101
NAF-Database Design	NAF DBASE DESG	L3	11.0802	0.5	N	10151
NAF-Digital Video Production	NAF DIG VIDEO PROD	L1	50.0602	0.5	F	11055
NAF-Graphic Design	NAF GRAPHIC DESIGN	L1	50.0409	0.5	N	11155
NAF-Introduction to Programming	NAF INTRO PROG	L3	11.0201	0.5	F	10151
NAF-Principles of Information Technology	NAF PRIN IT	L2	15.1201	0.5	F	10101
NAF-Principles of Information Technology IC3	NAF PRIN IT IC3	L2	15.1201	0.5	F	10101
NAF-Web Design	NAF WEB DESG	L1	11.0801	0.5	N	10201
Web Design and Development I	WEB DESG DEV I	L1	11.0801	1	N	10201
Web Design and Development II	WEB DESG DEV II	L2	11.0801	1	N	10201
Web Design and Development III	WEB DESG DEV III	L3C	11.0801	1	N	10201
Web Design and Development III LAB	WEB DESG DEV III L	L3L	11.0801	1	N	10201
Web Design and Development Advanced Studies	WEB DESG DEV AS	AS	11.0801	1	N	10201
Work Experience – Information Technology	WORK EXPER IT	WK	99.0011	1	N	10298

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SKILLED
&
TECHNICAL SCIENCES

CAREER CLUSTERS & PROGRAM ALIGNMENT

- ARCHITECTURE & CONSTRUCTION -

- Architectural Design
- Construction Technology
- Drafting & Design
- Furniture & Cabinetmaking

- MANUFACTURING -

- Automation Technology
- Electronic Technology
- Manufacturing Technologies
- Mechanical Technology
- Metalworking
- Welding Technology

- SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS -

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

- TRANSPORTATION, DISTRIBUTION & LOGISTICS -

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

PROGRAM DESCRIPTIONS

- *ARCHITECTURE & CONSTRUCTION* -

Architectural Design

The Architectural Design program introduces students to the principles of architectural design. Areas of emphasis include spatial reasoning, elements and principles of design, application of the design process, advanced digital drawing techniques, building codes, and professional presentation techniques.

Construction Technology

The Construction Technology program provides students the opportunity to develop technical skills that are used throughout the construction industry. Areas of study include safety, blueprint reading, carpentry and rough framing, exterior finishing applications, surveying, site development, scaffolding, electrical, plumbing, concrete, and masonry.

Drafting & Design

The Drafting and Design program provides students with the principles of technical and architectural drafting and design concepts. Areas of study include sketching, dimensioning and annotation, construction and engineering documentation, 3D modeling, problem solving, critiquing, and team building.

Furniture & Cabinetmaking

The Furniture and Cabinetmaking program will introduce students to the various stages of construction, fabrication, and assembly of wood products and related materials. This program is intended to provide students with the knowledge and skills necessary to design, construct, and finish furniture and/or cabinets in the woodworking industry. Through the program activities the student will gain an understanding of safety procedures, machine operation, and industrial applications including the software and hardware components of computer numerical control (CNC) equipment.

- *MANUFACTURING* -

Automation Technology

The Automation Technology program provides students the opportunity to develop technical skills that are used throughout the automation industry. Areas of study include safety, tools, power systems, programmable logic controllers, robotic methods, and principles of automation and how they apply to multiple industries.

Electronic Technology

The Electronic Technology program provides students the opportunity to develop technical skills that are used throughout the electronic industry. Areas of study include safety, tools, direct current (DC), alternating current (AC), schematics, soldering, measuring electricity, Ohm's/Watt's/Kirchhoff's Laws, semiconductors, electronic circuits, and digital theory.

Manufacturing Technologies

The Manufacturing Technologies program introduces students to the fundamentals of manufacturing. Areas of emphasis include print reading, spatial reasoning, automation, fabrication, quality control, and various manufacturing production methods.

Mechanical Technology

The Mechanical Technology program provides students the opportunity to learn the operation and maintenance of various mechanical, electrical, and fluid power systems. Areas of study include safety, tools usage, print reading, energy principles, power systems, manufacturing processes, and instrumentation.

Metalworking

The Metalworking program provides students with instruction in the various metalworking processes. Areas of study include safety procedures, print reading, measurement, properties of metals, machine operation, metal-fabricating methods, industrial applications, and problem-solving. Students will also be introduced to the principles of metallurgy, metal lathe operation, forging methods, casting process, welding, and heat-treating procedures.

Welding Technology

The Welding Technology program provides students with instruction in the industry standard welding practices. Areas of study include print reading, measurement, properties of metals, SMAW, GMAW, FCAW, GTAW, thermal cutting, codes, inspections, and certifications. This program prepares welding technology students for the American Welding Society (AWS) certification tests.

- SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS -

Aerospace Engineering

The Aerospace Engineering program provides students the opportunity to learn various aspects of aerospace engineering. Areas of study include safety, construction documentation, the engineering design process, impacts of engineering on society, material properties, energy principles, physics of flight, propulsion systems, orbital mechanics, and remote systems.

Architectural & Civil Engineering

The Architectural and Civil Engineering program provides students the opportunity to learn various aspects of architecture and civil engineering. Areas of study include safety, construction documentation, the engineering design process, impacts of engineering on society, material properties, energy principles, residential design concepts, and commercial applications.

Electrical Engineering

The Electrical Engineering program provides students the opportunity to learn various aspects of electronic engineering. Areas of study include safety, construction documentation, the engineering design process, impacts of engineering on society, material properties, energy principles, fundamental electronic principles, analog and digital principles, logic circuits, and microcontrollers.

Energy Technologies

The Energy Technologies program introduces students to the power industry. Students will gain an understanding of the various energy sources, energy forms, energy principles, efficiency concepts, electricity, and electrical codes and policies.

Environmental Engineering

The Environmental Engineering program explores the diverse fields of environmental engineering systems. Hands-on projects engage students in design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy.

Mechanical Engineering

The Mechanical Engineering program provides students the opportunity to learn various aspects of mechanical engineering. Areas of study include safety, construction documentation, the engineering design process, impacts of engineering on society, material properties, energy principles, manufacturing systems and processes, and automation.

- TRANSPORTATION, DISTRIBUTION & LOGISTICS -

Automotive Service Technician

The Automotive Service Technician program provides students with instruction in the operational and scientific nature of the automotive component systems including fuel, intake, exhaust, ignition, lubrication, braking, heating and cooling, electrical, and suspension systems. This program is aligned with the NATEF Automobile Service Technology (AST) program standards.

Automotive Technology

The Automotive Technology program provides students with instruction in the operational and scientific nature of the automotive component systems including fuel, intake, exhaust, ignition, lubrication, braking, heating and cooling, electrical, and suspension systems. This program is aligned with the NATEF Maintenance & Light Repair (MLR) program standards.

Aviation Maintenance Technician

The Aviation Maintenance Technician program will introduce students to the operational and scientific nature of the aviation maintenance industry. This program will introduce students to safe working habits, components of a reciprocating engine, aircraft control systems, and avionics systems.

Aviation Technology

The Aviation Technology program introduces student on 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 decisions making, accident prevention, Airman Information Manual, and the fundamentals of instrument flight. This course prepares the students to take the FAA Part 61.109 Private Pilot Written Exam

Collision Repair Technology

The Collision Repair Technology program provides students with instruction in collision repair and refinishing techniques. Areas of study include safety, surface prep, dent repair, metal repair, painting techniques, and painting applications.

Diesel Technology

The Diesel Technology program 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. Areas of study include: engines, steering and suspension, preventative maintenance, hydraulics, electrical systems, and braking systems.

PROGRAM COURSE SEQUENCES

- ARCHITECTURE & CONSTRUCTION -

Program Name	Course Sequence	State Skill Standards*
Architectural Design	**Core Course Sequence** Architectural Design I Architectural Design II Architectural Design III **Complementary Course(s)** Architectural Design II LAB Architectural Design III LAB Architectural Design Advanced Studies	Architectural Design
Construction Technology	**Core Course Sequence** Construction Technology I Construction Technology II Construction Technology III **Complementary Course(s)** Construction Technology II LAB ** Construction Technology III LAB ** Construction Technology Advanced Studies	Construction Technology
Drafting and Design	**Core Course Sequence** Drafting and Design I Drafting and Design II Drafting and Design III **Complementary Course(s)** Drafting and Design II LAB ** Drafting and Design III LAB ** Drafting and Design Advanced Studies	Drafting and Design
Furniture and Cabinetmaking	**Core Course Sequence** Furniture and Cabinetmaking I Furniture and Cabinetmaking II Furniture and Cabinetmaking III **Complementary Course(s)** Furniture and Cabinetmaking Advanced Studies	Furniture and Cabinetmaking

* 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*
Automation Technology	**Core Course Sequence** Automation Technology I Automation Technology II Automation Technology III **Complementary Course(s)** Automation Technology Advanced Studies	Automation Technology
Electronic Technology	**Core Course Sequence** Electronic Technology I Electronic Technology II Electronic Technology III **Complementary Course(s)** Electronic Technology II LAB ** Electronic Technology III LAB ** Electronic Technology Advanced Studies	Electronic Technology
Manufacturing Technologies	**Core Course Sequence** Manufacturing Technologies I Manufacturing Technologies II Manufacturing Technologies III **Complementary Course(s)** Manufacturing Technologies II LAB ** Manufacturing Technologies III LAB ** Manufacturing Technologies Advanced Studies	Manufacturing Technologies
Mechanical Technology	**Core Course Sequence** Mechanical Technology I Mechanical Technology II Mechanical Technology III **Complementary Course(s)** Mechanical Technology II LAB ** Mechanical Technology III LAB ** Mechanical Technology Advanced Studies	Mechanical Technology
Metalworking	**Core Course Sequence** Metalworking I Metalworking II Metalworking III **Complementary Course(s)** Metalworking Advanced Studies	Metalworking
Welding Technology	**Core Course Sequence** Welding Technology I Welding Technology II Welding Technology III **Complementary Course(s)** Welding Technology II LAB ** Welding Technology III LAB ** 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*
Aerospace Engineering	**Core Course Sequence** Aerospace Engineering I Aerospace Engineering II Aerospace Engineering III **Complementary Course(s)** Aerospace Engineering Advanced Studies	Aerospace Engineering
Energy Technologies	**Core Course Sequence** Energy Technologies I Energy Technologies II Energy Technologies III **Complementary Course(s)** Energy Technologies Advanced Studies	Energy Technologies
Project Lead The Way™ Pathway to Engineering (Aerospace)	**Project Lead The Way™ (PLTW):Pathway to Engineering** PLTW-Introduction to Engineering Design PLTW-Principles of Engineering PLTW-Aerospace Engineering **Complementary Course(s)** PLTW-Engineering Design and Development	Aerospace Engineering
Project Lead The Way™ Pathway to Engineering (Architectural & Civil)	**Project Lead The Way™ (PLTW):Pathway to Engineering** PLTW-Introduction to Engineering Design PLTW-Principles of Engineering PLTW-Civil Engineering and Architecture **Complementary Course(s)** PLTW-Engineering Design and Development	Architectural & Civil Engineering
Project Lead The Way™ Pathway to Engineering (Electrical)	**Project Lead The Way™ (PLTW):Pathway to Engineering** PLTW-Introduction to Engineering Design PLTW-Principles of Engineering PLTW-Digital Electronics **Complementary Course(s)** PLTW-Engineering Design and Development	Electrical Engineering
Project Lead The Way™ Pathway to Engineering (Environmental)	**Project Lead The Way™ (PLTW):Pathway to Engineering** PLTW-Introduction to Engineering Design PLTW-Principles of Engineering PLTW-Environmental Sustainability **Complementary Course(s)** PLTW-Engineering Design and Development	Environmental Engineering
Project Lead The Way™ Pathway to Engineering (Mechanical)	**Project Lead The Way™ (PLTW):Pathway to Engineering** PLTW-Introduction to Engineering Design PLTW-Principles of Engineering PLTW-Computer Integrated Manufacturing **Complementary Course(s)** PLTW-Engineering Design and Development	Mechanical 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** Automotive Service Technician I Automotive Service Technician II Automotive Service Technician III Automotive Service Technician IV **Complementary Course(s)** Automotive Service Technician II LAB ** Automotive Service Technician III LAB ** Automotive Service Technician IV LAB **	Automotive Service Technician
Automotive Technology	**Core Course Sequence** Automotive Technology I Automotive Technology II Automotive Technology III **Complementary Course(s)** Automotive Technology II LAB Automotive Technology III LAB Automotive Technology Advanced Studies	Automotive Technology
Aviation Maintenance Technician	**Core Course Sequence** Aviation Maintenance Technician I Aviation Maintenance Technician II Aviation Maintenance Technician III **Complementary Course(s)** Aviation Maintenance Technician Advanced Studies	Aviation Maintenance Technician
Aviation Technology	**Core Course Sequence** Aviation Technology I Aviation Technology II Aviation Technology III **Complementary Course(s)** Aviation Technology Advanced Studies	Aviation Technology
Collision Repair Technology	**Core Course Sequence** Collision Repair Technology I Collision Repair Technology II Collision Repair Technology III **Complementary Course(s)** Collision Repair Technology II LAB ** Collision Repair Technology III LAB ** Collision Repair Technology Advanced Studies	Collision Repair Technology
Diesel Technology	**Core Course Sequence** Diesel Technology I Diesel Technology II Diesel Technology III **Complementary Course(s)** Diesel Technology II LAB ** Diesel Technology III LAB ** 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 -

Architectural Design I

Prerequisite: None

This course provides Architectural Design students with the basic principles of architectural design. This course introduces fundamental print reading, sketching, digital drafting techniques, and architectural design theory. Students develop their architectural skills through project-based activities. The appropriate use of technology is an integral part of this course.

Architectural Design II

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. Areas of emphasis include spatial reasoning, elements and principles of design, application of the design process, and advanced digital drawing techniques. Advanced project-based activities provide students opportunities to develop their architectural design skills. Portfolio development will be emphasized. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Architectural Design II LAB

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.

Architectural Design III

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 both advanced design tasks and professional portfolios. Areas of emphasis will include building codes, building materials, green building techniques, and professional presentation skills. Students will complete project-based activities to compare residential and commercial architectural methodologies. 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.

Architectural Design III LAB

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.

Architectural Design Advanced Studies

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.

Construction Technology I

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.

Construction Technology II

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.

Construction Technology II LAB

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.

Construction Technology III

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.

Construction Technology III LAB

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.

Construction Technology Advanced Studies

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.

Drafting and Design I

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.

Drafting and Design II

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.

Drafting and Design II LAB

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.

Drafting and Design III

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.

Drafting and Design III LAB

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.

Drafting and Design Advanced Studies

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.

Furniture and Cabinetmaking I

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.

Furniture and Cabinetmaking II

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.

Furniture and Cabinetmaking III

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.

Furniture and Cabinetmaking Advanced Studies

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 – Architecture and Construction

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 -

Automation Technology I

Prerequisite: None

This course introduces students to the fundamentals of automation technologies. Areas of emphasis include lab safety, print reading, measuring techniques, power systems, basic automation systems, and basic programmable logic controls.

Automation Technology II

Prerequisite: Automation Technology I

This course is a continuation of Automation Technology I. This course provides intermediate automation technology students the ability to further their skills and knowledge levels. Areas of study focus on the integration of mechanical, electrical, hydraulic and robotic methods. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Automation Technology III

Prerequisite: Automation Technology II

This course is a continuation of Automation Technology II. This course provides advanced automation technology students with more in-depth skill development. Students will explore the use of robotics, programmable logic controllers, and the principles of automation and how they apply to multiple 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.

Automation Technology Advanced Studies

Prerequisite: Automation 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.

Electronic Technology I

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.

Electronic Technology II

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.

Electronic Technology II LAB

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.

Electronic Technology III

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.

Electronic Technology III LAB

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.

Electronic Technology Advanced Studies

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.

Manufacturing Technologies I

Prerequisite: None

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

Manufacturing Technologies II

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 spatial reasoning, 3D modeling, additive/subtractive manufacturing processes, joining/fastening processes, and basic instrumentation principles. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Manufacturing Technologies II LAB

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.

Manufacturing Technologies III

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, automation, 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.

Manufacturing Technologies III LAB

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.

Manufacturing Technologies Advanced Studies

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.

Mechanical Technology I

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.

Mechanical Technology II

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.

Mechanical Technology II LAB

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.

Mechanical Technology III

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.

Mechanical Technology III LAB

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.

Mechanical Technology Advanced Studies

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.

Metalworking I

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.

Metalworking II

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.

Metalworking III

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.

Metalworking Advanced Studies

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.

Welding Technology I

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.

Welding Technology II

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.

Welding Technology II LAB

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.

Welding Technology III

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.

Welding Technology III LAB

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.

Welding Technology Advanced Studies

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 – Manufacturing

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 -

Aerospace Engineering I

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.

Aerospace Engineering II

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.

Aerospace Engineering III

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.

Aerospace Engineering Advanced Studies

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.

Energy Technologies I

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.

Energy Technologies II

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.

Energy Technologies III

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.

Energy Technologies Advanced Studies

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.

PLTW-Aerospace Engineering

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.

PLTW-Civil Engineering and Architecture

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.

PLTW-Computer Integrated Manufacturing

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

PLTW-Digital Electronics

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.

PLTW-Engineering Design and Development

Prerequisite: PLTW-Aerospace Engineering or PLTW-Environmental Sustainability 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.

PLTW-Environmental Sustainability

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.

PLTW-Introduction to Engineering Design

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.

PLTW-Principles of Engineering

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 – Science Technology Engineering Mathematics

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 -

Automotive Service Technician I

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).

Automotive Service Technician II

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.

Automotive Service Technician II LAB

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.

Automotive Service Technician III

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.

Automotive Service Technician III LAB

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.

Automotive Service Technician IV

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.

Automotive Service Technician IV LAB

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.

Automotive Technology I

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

Automotive Technology II

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.

Automotive Technology II LAB

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.

Automotive Technology III

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.

Automotive Technology III LAB

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.

Automotive Technology Advanced Studies

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.

Aviation Maintenance Technician I

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.

Aviation Maintenance Technician II

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.

Aviation Maintenance Technician III

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.

Aviation Maintenance Technician Advanced Studies

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.

Aviation Technology I

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.

Aviation Technology II

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.

Aviation Technology III

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.

Aviation Technology Advanced Studies

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.

Collision Repair Technology I

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.

Collision Repair Technology II

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.

Collision Repair Technology II LAB

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.

Collision Repair Technology III

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.

Collision Repair Technology III LAB

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.

Collision Repair Technology Advanced Studies

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.

Diesel Technology I

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.

Diesel Technology II

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.

Diesel Technology II LAB

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.

Diesel Technology III

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.

Diesel Technology III LAB

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.

Diesel Technology Advanced Studies

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 – Transportation Distribution and Logistics

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.

COURSE DATA INFORMATION

- ARCHITECTURE & CONSTRUCTION -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Architectural Design I	ARCH DESG I	L1	04.0901	1	F	05192
Architectural Design II	ARCH DESG II	L2	04.0901	1	F	05192
Architectural Design II LAB	ARCH DESG II L	L2L	04.0901	1	F	05192
Architectural Design III	ARCH DESG III	L3C	04.0901	1	F	05192
Architectural Design III LAB	ARCH DESG III L	L3L	04.0901	1	F	05192
Architectural Design Advanced Studies	ARCH DESG AS	AS	04.0901	1	F	05192
Construction Technology I	CONST TECH I	L1	46.0000	1	F	17002
Construction Technology II	CONST TECH II	L2	46.0000	1	F	17002
Construction Technology II LAB	CONST TECH II L	L2L	46.0000	1	F	17002
Construction Technology III	CONST TECH III	L3C	46.0000	1	F	17002
Construction Technology III LAB	CONST TECH III L	L3L	46.0000	1	F	17002
Construction Technology Advanced Studies	CONST TECH AS	AS	46.0000	1	F	17002
Drafting and Design I	CADD I	L1	15.1302	1	F	21103
Drafting and Design II	CADD II	L2	15.1302	1	F	21103
Drafting and Design II LAB	CADD II L	L2L	15.1302	1	F	21103
Drafting and Design III	CADD III	L3C	15.1302	1	F	21103
Drafting and Design III LAB	CADD III L	L3L	15.1302	1	F	21103
Drafting and Design Advanced Studies	CADD AS	AS	15.1302	1	F	21103
Furniture and Cabinetmaking I	FURN CABINET I	L1	48.0702	1	N	17007
Furniture and Cabinetmaking II	FURN CABINET II	L2	48.0702	1	N	17007
Furniture and Cabinetmaking III	FURN CABINET III	L3C	48.0702	1	N	17007
Furniture and Cabinetmaking Advanced Studies	FURN CABINET AS	AS	48.0702	1	N	17007
Work Experience - Architecture and Construction	WORK EXPER CONST	WK	99.0002	1	F	17998

- MANUFACTURING -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Automation Technology I	AUTOMATION I	L1	14.4201	1	F	21010
Automation Technology II	AUTOMATION II	L2	14.4201	1	F	21010
Automation Technology III	AUTOMATION III	L3C	14.4201	1	F	21010
Automation Technology Advanced Studies	AUTOMATION AS	AS	14.4201	1	F	21010
Electronic Technology I	ELEC TECH I	L1	47.0105	1	F	17101
Electronic Technology II	ELEC TECH II	L2	47.0105	1	F	17101
Electronic Technology II LAB	ELEC TECH II L	L2L	47.0105	1	F	17101
Electronic Technology III	ELEC TECH III	L3C	47.0105	1	F	17101
Electronic Technology III LAB	ELEC TECH III L	L3L	47.0105	1	F	17101
Electronic Technology Advanced Studies	ELEC TECH AS	AS	47.0105	1	F	17101
Manufacturing Technologies I	MANUF TECH I	L1	15.0613	1	F	13002
Manufacturing Technologies II	MANUF TECH II	L2	15.0613	1	F	13002
Manufacturing Technologies II LAB	MANUF TECH II L	L2L	15.0613	1	F	13002
Manufacturing Technologies III	MANUF TECH III	L3C	15.0613	1	F	13002
Manufacturing Technologies III LAB	MANUF TECH III L	L3L	15.0613	1	F	13002
Manufacturing Technologies Advanced Studies	MANUF TECH AS	AS	15.0613	1	F	13002
Mechanical Technology I	MECH TECH I	L1	47.0303	1	F	13102
Mechanical Technology II	MECH TECH II	L2	47.0303	1	F	13102
Mechanical Technology II LAB	MECH TECH II L	L2L	47.0303	1	F	13102
Mechanical Technology III	MECH TECH III	L3C	47.0303	1	F	13102
Mechanical Technology III LAB	MECH TECH III L	L3L	47.0303	1	F	13102
Mechanical Technology Advanced Studies	MECH TECH AS	AS	47.0303	1	F	13102
Metalworking I	METALWRKG I	L1	48.0511	1	F	13202
Metalworking II	METALWRKG II	L2	48.0511	1	F	13202
Metalworking III	METALWRKG III	L3C	48.0511	1	F	13202
Metalworking Advanced Studies	METALWRKG AS	AS	48.0511	1	F	13202
Welding Technology I	WELDING TECH I	L1	48.0508	1	F	13207
Welding Technology II	WELDING TECH II	L2	48.0508	1	F	13207
Welding Technology II LAB	WELDING TECH II L	L2L	48.0508	1	F	13207
Welding Technology III	WELDING TECH III	L3C	48.0508	1	F	13207
Welding Technology III LAB	WELDING TECH III L	L3L	48.0508	1	F	13207
Welding Technology Advanced Studies	WELDING TECH AS	AS	48.0508	1	F	13207
Work Experience - Manufacturing	WORK EXPER MANUF	WK	99.0013	1	F	13098

- SCIENCE, TECHNOLOGY, ENGINEERING, & MATHEMATICS -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Aerospace Engineering I	AEROSPACE ENG I	L1	14.0201	1	F	21013
Aerospace Engineering II	AEROSPACE ENG II	L2	14.0201	1	F	21013
Aerospace Engineering III	AEROSPACE ENG III	L3C	14.0201	1	F	21013
Aerospace Engineering Advanced Studies	AEROSPACE ENG AS	AS	14.0201	1	F	21013
Energy Technologies I	ENERGY TECH I	L1	15.0503	1	F	03012
Energy Technologies II	ENERGY TECH II	L2	15.0503	1	F	03012
Energy Technologies III	ENERGY TECH III	L3C	15.0503	1	F	03012
Energy Technologies Advanced Studies	ENERGY TECH AS	AS	15.0503	1	F	03012
PLTW-Aerospace Engineering	PLTW AEROSPACE ENG	L3C	14.0201	1	F	21019
PLTW-Civil Engineering and Architecture	PLTW CIVIL ENG	L3C	14.0401	1	F	21021
PLTW-Computer Integrated Manufacturing	PLTW COMP INT MFG	L3C	14.1901	1	F	21022
PLTW-Digital Electronics	PLTW DIG ELEC	L3C	15.0303	1	F	21023
PLTW-Engineering Design and Development	PLTW ENG DESG DEV	AS	14.0101	1	F	21025
PLTW-Environmental Sustainability	PLTW ENVIRON SUS	L3C	14.0501	1	N	21024
PLTW-Introduction to Engineering Design	PLTW ENG DESG	L1	14.0101	1	F	21017
PLTW-Principles of Engineering	PLTW PRIN ENG	L2	14.0101	1	F	21018
Work Experience – Science Technology Engineering Mathematics	WORK EXPER STEM	WK	99.0015	1	F	21998

- TRANSPORTATION, DISTRIBUTION & LOGISTICS -

COURSE TITLE	ABBREVIATED NAME	LEVEL	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Automotive Service Technician I	AUTO SERV I	L1	47.0604	1	F	20106
Automotive Service Technician II	AUTO SERV II	L2	47.0604	1	F	20106
Automotive Service Technician II LAB	AUTO SERV II L	L2L	47.0604	1	F	20106
Automotive Service Technician III	AUTO SERV III	L3	47.0604	1	F	20106
Automotive Service Technician III LAB	AUTO SERV III L	L3L	47.0604	1	F	20106
Automotive Service Technician IV	AUTO SERV IV	L4C	47.0604	1	F	20106
Automotive Service Technician IV LAB	AUTO SERV IV L	L4L	47.0604	1	F	20106
Automotive Technology I	AUTO TECH I	L1	47.0600	1	F	20104
Automotive Technology II	AUTO TECH II	L2	47.0600	1	F	20104
Automotive Technology II LAB	AUTO TECH II L	L2L	47.0600	1	F	20104
Automotive Technology III	AUTO TECH III	L3C	47.0600	1	F	20104
Automotive Technology III LAB	AUTO TECH III L	L3L	47.0600	1	F	20104
Automotive Technology Advanced Studies	AUTO TECH AS	AS	47.0600	1	F	20104
Aviation Maintenance Technician I	AVI MAINT TECH I	L1	47.0608	1	F	20113
Aviation Maintenance Technician II	AVI MAINT TECH II	L2	47.0608	1	F	20113
Aviation Maintenance Technician III	AVI MAINT TECH III	L3C	47.0608	1	F	20113
Aviation Maintenance Technician Advanced Studies	AVI MAINT TECH AS	AS	47.0608	1	F	20113
Aviation Technology I	AVIATION TECH I	L1	49.0101	1	F	20053
Aviation Technology II	AVIATION TECH II	L2	49.0101	1	F	20053
Aviation Technology III	AVIATION TECH III	L3C	49.0101	1	F	20053
Aviation Technology Advanced Studies	AVIATION TECH AS	AS	49.0101	1	F	20053
Collision Repair Technology I	COLL REPAIR I	L1	47.0603	1	F	20116
Collision Repair Technology II	COLL REPAIR II	L2	47.0603	1	F	20116
Collision Repair Technology II LAB	COLL REPAIR II L	L2L	47.0603	1	F	20116
Collision Repair Technology III	COLL REPAIR III	L3C	47.0603	1	F	20116
Collision Repair Technology III LAB	COLL REPAIR III L	L3L	47.0603	1	F	20116
Collision Repair Technology Advanced Studies	COLL REPAIR AS	AS	47.0603	1	F	20116
Diesel Technology I	DIESEL TECH I	L1	47.0605	1	F	20107
Diesel Technology II	DIESEL TECH II	L2	47.0605	1	F	20107
Diesel Technology II LAB	DIESEL TECH II L	L2L	47.0605	1	F	20107
Diesel Technology III	DIESEL TECH III	L3C	47.0605	1	F	20107
Diesel Technology III LAB	DIESEL TECH III L	L3L	47.0605	1	F	20107
Diesel Technology Advanced Studies	DIESEL TECH AS	AS	47.0605	1	F	20107
Work Experience - Transportation Distribution and Logistics	WORK EXPER TRANS	WK	99.0016	1	F	20998