

NEVADA
CAREER AND TECHNICAL EDUCATION (CTE)
COURSE CATALOG
2022-23



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VISION

All Nevadans ready for success in the 21st century

MISSION

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



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INTRODUCTION

PURPOSE

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

- The CTE course and course sequence **teach 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 **include 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 challenges to meet state and/or industry-standards.

CATALOG ORGANIZATION

Courses are organized according to the National Career Clusters® Framework. Courses within each Career Cluster area includes the following elements: (1) Program of Study Description; (2) Program Course Sequences; (3) Course Descriptions; and (4) Course Data Information.

PROGRAM DESCRIPTIONS

Each section begins with a description of the program of study. This description provides a brief explanation of the overall purpose and instructional topics the student will have access to while completing the program of study.

PROGRAM COURSE SEQUENCES

The course sequencing provided in each 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 Nevada CTE State standards in each program.

The sequencing tables provide the appropriate order of courses in each program of study. 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 “completer” status.

Complementary courses are those courses that directly support additional time and instruction of the State standards and must align to a student’s program of study. Complementary courses are considered additional courses and do not count as progress toward “completer” status. Complementary courses 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 below.

Complementary courses may be added to a student's program of study if all the following conditions 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; and
- Prerequisites of the course are completed.

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. 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 general and are intended to be used by school districts and schools for their annual catalogs, registration materials, etc. The description may be enhanced as desired at the local level. An example for an Animal Science course is shown below.

Animal Science

Prerequisite: Principles of Agriculture, Food, and Natural Resources

This course is a continuation of Principles of Agriculture, Food, and Natural Resources. This course allows advanced students to expand on skills and knowledge from Principles of Agriculture, Food, and Natural Resources while exploring the livestock and companion animal industries. 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.

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, Classification of Instructional Programs (CIP) Codes, credits, Non-Traditional, and School Courses for the Exchange of Data (SCED) Codes** 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 following notes on SCED are intended to aid district staff in implementing the data elements included in the CTE Course Catalog. However, for complete information please see the CTE SCED Code Directory released by the CTE Accountability Office as a supplement to the CTE Course Catalog.

The Office of Career Readiness, Adult Learning, and Education Options (CRALEO) is working to phase out the use of course levels as NDE transitions to the use of SCED codes. While the existing course levels are being maintained as districts continue to implement SCED codes, please note that the information is no longer included in the CTE Course Catalog. The same information can be determined using a course's full SCED Code. SCED Codes are made up of four main elements:

- Subject Area and Course Number are the first five numbers included in this catalog;

- Course Levels used by CRALEO are “G” (general courses that are core to a sequence), “E” (enhanced courses such as Labs and Advanced Studies), or “C” (indicating dual credit, dual enrollment, and/or college course);
- Carnegie Unit Credit (provides the number of credits for the entire course); and,
- Sequence of Courses, which indicates the order in which courses should be taught (i.e., a course sequence of “12” indicates that it is the first course in a two-course sequence, while a “22” course is the second course in a two-course sequence). This provides similar information to the previously used level codes.

Please review the SCED Directory issued by CRALEO Data staff each year for full codes.

The following notes provide additional guidance about the data elements found in the data tables included in this catalog:

- Lab courses are to be taught concurrently with the associated level course (i.e., level two course with the level two lab course) and should appear with a Course Level of “E” and the same sequence as the course they accompany. Please see individual course descriptions for requirements and prerequisites. The Advanced Studies courses allow students to continue taking courses beyond the completion level courses and are repeatable, unless otherwise noted. They should be entered with a Course Level of “E” and a sequence of “11”.
- CTE Work Experience courses should be entered with a Course Level of “G”, a sequence of “11” and 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 are utilized for correctly aligning CTE courses to respective programs of study to ensure accurate state/federal data reporting, allocation funding, assessment rostering, etc.

CATALOG UPDATES AND REVISIONS

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

Below is the list of **Programs of Study (by program area and Career Cluster)** that will be sunsetting this year. For students who began a program in the 2021-22 school year, please refer to the Nevada Career and Technical Course Catalog 2021-22 for course information and sequence to be followed to complete these Programs of Study.

Agriculture and Natural Resources

Agriculture, Food, and Natural Resources

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

Business and Marketing Education

Business Management and Administration

- Business Management (3-year)

Finance

None

Marketing

- Marketing (3-year)

Education, Hospitality, and Human Services

Education and Training

- Teaching and Training (3-year)

Hospitality and Tourism

None

Human Services

None

Health Science and Public Safety

Government and Public Administration

None

Health Science

- Community Health Science (3-year)
- Nursing Assistant (3-year)
- Sports Medicine (3-year)

Law, Public Safety, Corrections, and Security

- Forensic Science (3-year)

Information and Media Technologies

Arts, A/V Technology, and Communications

None

Information Technology

- Digital Game Development (3-year)

Skilled and Technical Sciences

Architecture and Construction

- Construction Technology
- Furniture and Cabinetmaking

Manufacturing

- Welding Technology (3-year)

Science, Technology, Engineering, and Mathematics

- Energy Technologies (3-year)

Transportation, Distribution, and Logistics

None

Below is a list of **new the Programs of Study or changes to Programs of Study** and their sequence. Please note that they are listed by the Career Cluster for consistency with the new catalog organization. Additional complementary courses will be offered beginning in 2024-25 and listed in the 2023-24 Nevada CTE Course Catalog.

Agriculture, Food, and Natural Resources

Animal Systems: New program of study. Below is the course sequence:

- Principles of Agriculture, Food, and Natural Resources
- Animal Science
- Animal Science Advanced Studies
- CTE Work Experience – Agriculture, Food, and Natural Resources

Plant Systems: New program of study. Below is the course sequence:

- Principles of Agriculture, Food, and Natural Resources
- Plant Science
- Plant Science Advanced Studies
- CTE Work Experience – Agriculture, Food, and Natural Resources

Architecture and Construction

Building Trades in Construction Technology: New program of study. Below is the course sequence:

- Building Trades in Construction Technology I
- Building Trades in Construction Technology II
- Building Trades in Construction Technology II Lab
- Building Trades in Construction Technology Advanced Studies
- CTE Work Experience – Architecture and Construction

Arts, A/V Technology, and Communications

None

Business Management and Administration

Business Management: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Principles of Business and Marketing
- Business Management I
- Business Management Advanced Studies
- CTE Work Experience – Business Management and Administration

Education and Training

Teaching and Training: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Teaching and Training I
- Teaching and Training II
- Teaching and Training Advanced Studies
- CTE Work Experience – Education and Training

Finance

None

Government and Public Administration

None

Health Science

Community Health Science: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Health Science
- Community Health Science
- Community Health Science Advanced Studies
- CTE Work Experience – Health Science

Nursing Assistant: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Health Science
- Nursing Assistant
- Nursing Assistant Lab
- CTE Work Experience – Health Science

Sports Medicine: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Health Science
- Sports Medicine
- Sports Medicine Advanced Studies
- CTE Work Experience – Health Science

Hospitality and Tourism

None

Human Services

Human and Social Services: New program of study. Below is the course sequence:

- Human and Social Services I
- Human and Social Services II
- Human and Social Services Advanced Study
- CTE Work Experience – Human Services

Information Technology

Digital Game Development: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Digital Game Development I
- Digital Game Development II
- Digital Game Development Advanced Studies
- CTE Work Experience – Information Technology

Law, Public Safety, Corrections, and Security

Forensic Science: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Forensic Science I
- Forensic Science II
- Forensic Science Advanced Studies
- CTE Work Experience – Law, Public Safety, Corrections, and Security

Manufacturing

Welding Technology: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Welding Technology I
- Welding Technology II
- Welding Technology II Lab
- Welding Technology Advanced Studies
- CTE Work Experience – Manufacturing

Marketing

Marketing: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Principles of Business and Marketing
- Marketing I
- Marketing Advanced Studies
- CTE Work Experience – Marketing

Science, Technology, Engineering, and Mathematics

Energy Technologies: Standards revised to become a 2-year program of study. Below is the new course sequence:

- Energy Technologies I
- Energy Technologies II
- Energy Technologies Advanced Studies
- CTE Work Experience – Science, Technology, Engineering, and Mathematics

Transportation, Distribution, and Logistics

None

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PROGRAM ALIGNMENT FOR AGRICULTURE, FOOD, AND NATURAL RESOURCES

This Career Cluster® is focused on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products or resources.

- Agricultural Mechanics Technology
- Animal Systems
- Plant Systems

PROGRAM DESCRIPTIONS
AGRICULTURE, FOOD, AND NATURAL RESOURCES

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, machinery maintenance and repair, and leadership development.

Animal Systems

The Animal Systems 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, careers, and leadership development.

Plant Systems

The Plant Systems program provides students with the principles of plant science, ornamental horticulture, floriculture, landscape design, and greenhouse management. Areas of study include safety practices, plant anatomy and physiology, plant identification, plant selection and care, propagation, growing media, nutrition, integrated pest management, plant technologies, growing greenhouse crops, greenhouse business concepts, careers, and leadership development.

PROGRAM COURSE SEQUENCES
AGRICULTURE, FOOD, AND NATURAL RESOURCES

Program Name	Course Sequence	State Skill Standards*
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 CTE Work Experience – Agriculture, Food, and Natural Resources	Agricultural Mechanics Technology
Animal Systems	Core Course Sequence Principles of Agriculture, Food, and Natural Resources Animal Science Complementary Course(s) Animal Science Advanced Studies CTE Work Experience – Agriculture, Food, and Natural Resources	Animal Science
Plant Systems	Core Course Sequence Principles of Agriculture, Food, and Natural Resources Plant Science Complementary Course(s) Plant Science Advanced Studies CTE Work Experience – Agriculture, Food, and Natural Resources	Plant Science

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

COURSE DESCRIPTIONS

AGRICULTURE, FOOD, AND NATURAL RESOURCES

Agricultural Mechanics Technology I

Prerequisite: None

This course will introduce students to 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: Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (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 and desire 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.

Animal Science

Prerequisite: Principles of Agriculture, Food, and Natural Resources

This course is a continuation of Principles of Agriculture, Food, and Natural Resources. This course allows advanced students to expand on skills and knowledge from Principles of Agriculture, Food, and Natural Resources while exploring the livestock and companion animal industries. 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 and desire 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

Prerequisite: Principles of Agriculture, Food, and Natural Resources

This course is a continuation of Principles of Agriculture, Food, and Natural Resources. 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. The appropriate use of technology and industry-standard equipment is an integral part of this course. An essential part of this course will be leadership activities and Supervised Agricultural Experience Programs.

Plant Science Advanced Studies

Prerequisite: Plant Science

This course is offered to students who have achieved all content standards in a program and desire 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 Agriculture, Food, and Natural Resources

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.

CTE Work Experience – Agriculture, Food, and Natural Resources

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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 AND NATURAL RESOURCES

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Agricultural Mechanics Technology I	AG MECH TECH I	01.0205	1	F	18402
Agricultural Mechanics Technology II	AG MECH TECH II	01.0205	1	F	18402
Agricultural Mechanics Technology III	AG MECH TECH III	01.0205	1	F	18402
Agricultural Mechanics Technology Advanced Studies	AG MECH TECH AS	01.0205	1	F	18402
Animal Science	ANIMAL SCI	01.0901	1	F	18101
Animal Science Advanced Studies	ANIMAL SCI AS	01.0901	1	F	18101
Plant Science	PLANT SCI	01.1101	1	F	18051
Plant Science Advanced Studies	PLANT SCI AS	01.1101	1	F	18051
Principles of Agriculture, Food, and Natural Resources	AG SCIENCE	01.0000	1	N	18003
CTE Work Experience – Agriculture, Food, and Natural Resources	WORK EXPER AFNR	99.0001	1	N	18998

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

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PROGRAM ALIGNMENT FOR ARCHITECTURE AND CONSTRUCTION

This Career Cluster® is focused on careers in designing, planning, managing, building, and maintaining the built environment.

- Architectural Design
 - Drafting and Design
 - Building Trades in Construction Technology
 - Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)
 - Interior Design
-

PROGRAM DESCRIPTIONS
ARCHITECTURE AND 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.

Building Trades in Construction Technology

The Building Trades in Construction Technology program provides students with the opportunity to develop technical skills in the building trades within the construction industry. Students will develop skills in the areas of construction including safety, proper use of hand and power tools, blueprint reading, framing, floor systems, finish carpentry, exterior finish applications, fundamental design techniques, identifying material properties and hardware, manufacturing processes, and applying basic principles of plumbing and electrical.

Drafting and 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.

Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)

The heating, ventilation, air conditioning, and refrigeration program provides students with the opportunity to develop technical skills that are used in the HVACR industry. Areas include an introduction to HVACR, trade mathematics, thermodynamics, components of the refrigeration cycle, basic electricity, introduction to heating and combustion, piping principles, soldering, and brazing, compressors, refrigerants, and metering devices.

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.

PROGRAM COURSE SEQUENCES
ARCHITECTURE AND 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 CTE Work Experience - Architecture and Construction	Architectural Design
Building Trades in Construction Technology	Core Course Sequence Building Trades in Construction Technology I Building Trades in Construction Technology II Complementary Course(s) Building Trades in Construction Technology II LAB** Building Trades in Construction Technology Advanced Studies CTE Work Experience - Architecture and Construction	Building Trades in 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 CTE Work Experience - Architecture and Construction	Drafting and Design
Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)	Core Course Sequence Heating, Ventilation, Air Conditioning, and Refrigeration I Heating, Ventilation, Air Conditioning, and Refrigeration II Complementary Courses Heating, Ventilation, Air Conditioning, and Refrigeration III Heating, Ventilation, Air Conditioning, and Refrigeration II Lab** Heating, Ventilation, Air Conditioning, and Refrigeration III Lab** Heating, Ventilation, Air Conditioning, and Refrigeration Advanced Studies CTE Work Experience - Architecture and Construction	Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)
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 CTE Work Experience - Architecture and Construction	Interior Design

* 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 AND 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 and desire 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.

Building Trades in Construction Technology I

Prerequisite: None

This course will introduce students to the construction industry. Through a hands-on approach, each student will develop basic understanding in the areas of construction: safety, blueprint reading, finish carpentry, framing, fundamental design techniques, identifying material properties and hardware, and applying basic principles of plumbing, electrical and manufacturing processes. Practical application of safe work habits and the correct use of tools and equipment will be emphasized throughout this course. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Building Trades in Construction Technology II

Prerequisite: Building Trades in Construction Technology I

This course is a continuation of Building Trades in Construction Technology I. This course provides intermediate students with additional knowledge and skills in the use of power tools fundamental design techniques, manufacturing processes, framing systems and exterior finish applications, The appropriate use of technology and industry-standard equipment is an integral part of this course.

Building Trades in Construction Technology II Lab

Prerequisite: Concurrent enrollment in Building Trades 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.

Building Trades in Construction Technology Advanced Studies

Prerequisite: Building Trades in Construction Technology II

This course is offered to students who have achieved all content standards in a program and desire 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 advanced 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 and desire 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.

Heating, Ventilation, Air Conditioning, and Refrigeration I

Prerequisite: None

This course will introduce students to Heating, Ventilation, and Air Conditioning (HVAC). Through a hands-on approach, each student will develop basic understanding in the areas of HVAC: safety, blueprint reading, principles that guide installation and service, electrical components, thermodynamics and heat transfer, and an introduction to heating and refrigeration systems. Practical application of safe work habits and the correct use of tools and equipment will be emphasized throughout this course.

Heating, Ventilation, Air Conditioning, and Refrigeration II

Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration I

This course is a continuation of Heating, Ventilation, Air Conditioning, and Refrigeration I. This course provides intermediate HVAC students with knowledge and skills in piping principles, compressors, aspects of refrigerants, and metering devices. 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.

Heating, Ventilation, Air Conditioning, and Refrigeration II LAB

Prerequisite: Concurrent enrollment in Heating, Ventilation, Air Conditioning, and Refrigeration 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.

Heating, Ventilation, Air Conditioning, and Refrigeration III

Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration II

This course is a continuation of Heating, Ventilation, Air Conditioning, and Refrigeration II. This course provides advanced HVAC students with knowledge and skills in air distribution systems, heat pumps, common types of duct work, commercial airside systems, indoor air quality and hydronic systems. Through hands-on projects, students develop technical skills that are used throughout the HVAC industry. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Heating, Ventilation, Air Conditioning, and Refrigeration III LAB

Prerequisite: Concurrent enrollment in Heating, Ventilation, Air Conditioning, and Refrigeration 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.

Heating, Ventilation, Air Conditioning, and Refrigeration Advanced Studies

Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration III

This course is offered to students who have achieved all content standards in a program and desire 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 principles 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 and desire 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.

CTE Work Experience – Architecture and Construction

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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 AND CONSTRUCTION

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Architectural Design I	ARCH DESG I	04.0901	1	F	05192
Architectural Design II	ARCH DESG II	04.0901	1	F	05192
Architectural Design II LAB	ARCH DESG II L	04.0901	1	F	05192
Architectural Design III	ARCH DESG III	04.0901	1	F	05192
Architectural Design III LAB	ARCH DESG III L	04.0901	1	F	05192
Architectural Design Advanced Studies	ARCH DESG AS	04.0901	1	F	05192
Building Trades in Construction Technology I	BUILD CONST TECH I	46.0000	1	F	17003
Building Trades in Construction Technology II	BUILD CONST TECH II	46.0000	1	F	17003
Building Trades in Construction Technology II LAB	BUILD CONST TECH II LAB	46.0000	1	F	17003
Building Trades in Construction Technology Advanced Studies	BUILD CONST TECH AS	46.0000	1	F	17003
Drafting and Design I	CADD I	15.1302	1	F	21103
Drafting and Design II	CADD II	15.1302	1	F	21103
Drafting and Design II LAB	CADD II L	15.1302	1	F	21103
Drafting and Design III	CADD III	15.1302	1	F	21103
Drafting and Design III LAB	CADD III L	15.1302	1	F	21103
Drafting and Design Advanced Studies	CADD AS	15.1302	1	F	21103
Heating, Ventilation, Air Conditioning, and Refrigeration I	HVACR I	47.0201	1	F	17055
Heating, Ventilation, Air Conditioning, and Refrigeration II	HVACR II	47.0201	1	F	17055
Heating, Ventilation, Air Conditioning, and Refrigeration II Lab	HVACR II L	47.0201	1	F	17055
Heating, Ventilation, Air Conditioning, and Refrigeration III	HVACR III	47.0201	1	F	17055
Heating, Ventilation, Air Conditioning, and Refrigeration III Lab	HVACR III L	47.0201	1	F	17055
Heating, Ventilation, Air Conditioning, and Refrigeration Advanced Studies	HVACR AS	47.0201	1	F	17055
Interior Design I	INT DESIGN I	50.0408	1	N	05193
Interior Design II	INT DESIGN II	50.0408	1	N	05193
Interior Design II LAB	INT DESIGN II L	50.0408	1	N	05193
Interior Design III	INT DESIGN III	50.0408	1	N	05193
Interior Design III LAB	INT DESIGN III L	50.0408	1	N	05193
Interior Design Advanced Studies	INT DESIGN AS	50.0408	1	N	05193
CTE Work Experience - Architecture and Construction	WORK EXPER CONST	99.0002	1	F	17998

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SCED, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT

ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS

This Career Cluster® is focused on designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

- Fashion, Textiles, and Design
 - Graphic Design
 - Multimedia Communications
 - Photography
 - Radio Production
 - Theatre Technology
 - Video Production
-

PROGRAM DESCRIPTIONS
ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS

Fashion, Textiles, and 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 to the principles of creating graphic works. Areas of study include elements and principles of design, production aspects, legal and ethical issues, and portfolio development.

Multimedia Communications

The Multimedia Communications program provides students with fundamentals in various media technologies used in business for digital communications. Areas of study will include website development, user interface, video, photo, written content, social medial marketing, and front-end design. Practices incorporate an appreciation of alternative and culturally diverse perspectives essential in business communication.

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.

PROGRAM COURSE SEQUENCES
ARTS, A/V TECHNOLOGY AND 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 CTE Work Experience – Arts, A/V Technology, and Communication	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 CTE Work Experience – Arts, A/V Technology, and Communication	Graphic Design
Multimedia Communications	Core Course Sequence Multimedia Communications I Multimedia Communications II Complementary Course(s) Multimedia Communications Advanced Studies CTE Work Experience – Arts, A/V Technology, and Communication	Multimedia Communications
Photography	Core Course Sequence Photography I Photography II Photography III Complementary Course(s) Photography Advanced Studies CTE Work Experience – Arts, A/V Technology, and Communication	Photography
Radio Production	Core Course Sequence Radio Production I Radio Production II Radio Production III Complementary Course(s) Radio Production Advanced Studies CTE Work Experience – Arts, A/V Technology, and Communication	Radio Production
Theatre Technology	Core Course Sequence Theatre Technology I Theatre Technology II Theatre Technology III Complementary Course(s) Theatre Technology Advanced Studies CTE Work Experience – Arts, A/V Technology, and Communication	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 AND 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 CTE Work Experience – Arts, A/V Technology, and Communication	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.

COURSE DESCRIPTIONS

ARTS, A/V TECHNOLOGY, AND 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 and desire 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 II. 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 and desire 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.

Multimedia Communications I

Prerequisite: None

This course introduces students to various media technologies used in business for digital communications. Areas of study will include website development, user interface, video, photo, written content, social media marketing, and front-end design. Practices incorporate an appreciation of alternative and culturally diverse perspectives essential in business communication. The appropriate use of technology and industry-standard tools and techniques is an integral part of this course.

Multimedia Communications II

Prerequisite: Multimedia Communications I

This course is a continuation of Multimedia Communications I and introduces students to various advanced content and media creation techniques used in business for digital communications. Areas of study will include website development, user interface, video, photo, written content, social media marketing, and front-end design. Practices incorporate an appreciation of alternative and culturally diverse perspectives essential in business communication. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

Multimedia Communications Advanced Studies

Prerequisite: Multimedia Communications II

This course is offered to students who have achieved all content standards in a program and desire to pursue advanced study through portfolio development and in-depth skill application. 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 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 and desire 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 and desire 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, theatre 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 theatre 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 theatre 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 and desire 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 and desire 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.

CTE Work Experience – Arts A/V Technology and Communication

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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 AND COMMUNICATIONS

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Fashion Design and Construction I	FASHION CONST I	50.0407	1	N	05190
Fashion Design and Construction II	FASHION CONST II	50.0407	1	N	05190
Fashion Design and Construction III	FASHION CONST III	50.0407	1	N	05190
Fashion Design and Construction Advanced Studies	FASHION CONST AS	50.0407	1	N	05190
Graphic Design I	GRAPHIC DESG I	50.0409	1	N	11155
Graphic Design II	GRAPHIC DESG II	50.0409	1	N	11155
Graphic Design II LAB	GRAPHIC DESG II L	50.0409	1	N	11155
Graphic Design III	GRAPHIC DESG III	50.0409	1	N	11155
Graphic Design III LAB	GRAPHIC DESG III L	50.0409	1	N	11155
Graphic Design Advanced Studies	GRAPHIC DESG AS	50.0409	1	N	11155
Multimedia Communications I	MULTIMEDIA COM I	09.0702	1	N	10203
Multimedia Communications II	MULTIMEDIA COM II	09.0702	1	N	10203
Multimedia Communications Advanced Studies	MULTIMEDIA COM AS	09.0702	1	N	10203
Pattern Drafting	PAT DRAFTING	50.0407	1	N	05164
Photography I	PHOTO I	50.0406	1	N	05167
Photography II	PHOTO II	50.0406	1	N	05167
Photography III	PHOTO III	50.0406	1	N	05167
Photography Advanced Studies	PHOTO AS	50.0406	1	N	05167
Radio Production I	RADIO PROD I	10.0202	1	F	11107
Radio Production II	RADIO PROD II	10.0202	1	F	11107
Radio Production III	RADIO PROD III	10.0202	1	F	11107
Radio Production Advanced Studies	RADIO PROD AS	10.0202	1	F	11107
Theatre Technology I	THEATRE TECH I	50.0502	1	N	05056
Theatre Technology II	THEATRE TECH II	50.0502	1	N	05056
Theatre Technology III	THEATRE TECH III	50.0502	1	N	05056
Theatre Technology Advanced Studies	THEATRE TECH AS	50.0502	1	N	05056
Video Production I	VIDEO PROD I	50.0602	1	F	05168
Video Production II	VIDEO PROD II	50.0602	1	F	05168
Video Production II LAB	VIDEO PROD II L	50.0602	1	F	05168
Video Production III	VIDEO PROD III	50.0602	1	F	05168
Video Production III LAB	VIDEO PROD III L	50.0602	1	F	05168
Video Production Advanced Studies	VIDEO PROD AS	50.0602	1	F	05168
CTE Work Experience - Arts A/V Technology and Communication	WORK EXPER TECH	99.0003	1	N	10248

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SCED, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

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PROGRAM ALIGNMENT FOR BUSINESS MANAGEMENT AND ADMINISTRATION

This Career Cluster® is focused on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

- Administrative Services
- Business Management



PROGRAM DESCRIPTIONS
BUSINESS MANAGEMENT AND 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.

PROGRAM COURSE SEQUENCES
BUSINESS MANAGEMENT AND ADMINISTRATION

Program Name	Course Sequence	State Skill Standards*
Administrative Services	Core Course Sequence Office Management I Office Management II Office Management III Complementary Course(s) Office Management Advanced Studies CTE Work Experience – Business Management and Administration	Administrative Services
Business Management	Core Course Sequence Principles of Business and Marketing ◊ Business Management I Complementary Course(s) Business Management Advanced Studies CTE Work Experience – Business Management and Administration	Business Management
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 CTE Work Experience – Business Management and Administration	Business Management
Business Management 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 CTE Work Experience – Business Management and Administration	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-section (see page MKTG-1 for Course Description and MKTG-4 Course Data Information).

COURSE DESCRIPTIONS

BUSINESS MANAGEMENT AND ADMINISTRATION

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 Advanced Studies

Prerequisite: Business Management I

This course is offered to students who have achieved all content standards in a program and desire 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.

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.

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.

Office Management I

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 in web functions, bookkeeping foundations, word-processing applications, spreadsheet applications, presentation applications, and database applications as they are used in a business environment. Students will understand and abide by policies for technology.

Office Management II

Prerequisite: Office Management I

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 III

Prerequisite: Office Management II

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 III

This course is offered to students who have achieved all content standards in a program and desire 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.

CTE Work Experience – Business Management and Administration

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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 AND ADMINISTRATION

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Business Management I	BUS MGMT I	52.0201	1	F	12052
Business Management Advanced Studies	BUS MGMT AS	52.0201	1	F	12052
HSB-Business Economics	HSB BUS ECONOMICS	52.0601	0.5	N	12052
HSB-Business Strategies	HSB BUS STRATEGY	52.0299	0.5	F	12052
HSB-Leadership	HSB LEADERSHIP	52.0213	0.5	N	12052
HSB-Principles of Business	HSB PRIN BUSINESS	52.0101	0.5	F	12052
HSB-Principles of Finance	HSB PRIN FINANCE	52.0801	0.5	N	12052
HSB-Principles of Management	HSB PRIN MGMT	52.0201	0.5	F	12052
HSB-Principles of Marketing	HSB PRIN MKTG	52.1401	0.5	N	12052
HSB-Wealth Management	HSB WEALTH MGMT	52.0804	0.5	N	12052
NAF-Applied Finance	NAF APPLIED FINC	52.0801	0.5	N	12052
NAF-Business Economics	NAF BUS ECON	52.0601	0.5	N	12052
NAF-Business in a Global Economy	NAF BUS GLOB ECON	45.0605	0.5	N	12052
NAF-Entrepreneurship	NAF ENTREPRENEUR	52.0701	0.5	N	12052
NAF-Ethics in Business	NAF ETHICS IN BUS	38.0104	0.5	N	12052
NAF-Financial Planning	NAF FINC PLANNING	52.0804	0.5	N	12052
NAF-Financial Services	NAF FINC SERVICES	52.0803	0.5	M	12052
NAF-Insurance	NAF INSURANCE	52.1701	0.5	M	12052
NAF-Managerial Accounting	NAF MANAGE ACCT	52.0305	0.5	N	12052
NAF-Principles of Accounting	NAF PRIN ACCT	52.0301	0.5	N	12052
NAF-Principles of Finance	NAF PRIN FINC	52.0204	0.5	N	12052
Office Management I	OFFICE MGMT I	52.0204	1	N	12003
Office Management II	OFFICE MGMT II	52.0204	1	N	12003
Office Management III	OFFICE MGMT III	52.0204	1	N	12003
Office Management Advanced Studies	OFFICE MGMT AS	52.0204	1	N	12003
CTE Work Experience - Business Management and Administration	WORK EXPER BUS ADM	99.0004	1	F	12998

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR EDUCATION AND TRAINING

This Career Cluster® is focused on planning, managing, and providing education and training services, and related learning support services.

- Early Childhood Education
- Teaching and Training

PROGRAM DESCRIPTIONS
EDUCATION AND TRAINING

Early Childhood Education

The Early Childhood Education program addresses child development, childcare, 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 and Training

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

PROGRAM COURSE SEQUENCES
EDUCATION AND 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 CTE Work Experience – Education and Training	Early Childhood Education
Teaching and Training	Core Course Sequence Teaching and Training I Teaching and Training II Complementary Course(s) Teaching and Training Advanced Studies CTE Work Experience – Education and Training	Teaching and 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.

COURSE DESCRIPTIONS

EDUCATION AND 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, learning, and education issues. Project-based learning experiences include planning and implementing developmentally appropriate activities, health and safety practices, and legal requirements of teaching young children. Students will research the requirements of early childhood education and develop/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 and desire 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 education. This course addresses teaching, and learning. Study includes planning and implementing developmentally appropriate activities, basic health and safety practices, and legal requirements for teaching. The appropriate use of technology and industry-standard equipment is an integral part of this course. Students will research the requirements of education 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. Students will continue to develop skills, advanced techniques, and processes. Project-based learning experiences will include planning and implementing developmentally appropriate activities, health and safety practices, and legal requirements of teaching in a school classroom or workplace environment. The appropriate use of technology and industry-standard equipment is an integral part of this course. Students will expand their career portfolio.

Teaching and Training Advanced Studies

Prerequisite: Teaching and Training II

This course is offered to students who have achieved all content standards in a program and desire 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.

CTE Work Experience – Education and Training

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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 AND TRAINING***

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

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

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PROGRAM ALIGNMENT FOR FINANCE

This Career Cluster® is focused on planning, services for financial and investment planning, banking, insurance, and business financial management.

- Accounting and Finance

PROGRAM DESCRIPTIONS***FINANCE*****Accounting and Finance**

The Accounting and 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.

PROGRAM COURSE SEQUENCES**FINANCE**

Program Name	Course Sequence	State Skill Standards*
Accounting and Finance	Core Course Sequence Accounting and Finance I Accounting and Finance II Complementary Course(s) Accounting and Finance Advanced Studies CTE Work Experience – Finance	Accounting and Finance

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

COURSE DESCRIPTIONS**FINANCE****Accounting and Finance I**

Prerequisite: None

Students will learn introductory accounting processes and occupational skills in accounting such as recording business transactions, preparing financial statements, maintaining cash controls, and calculating financial ratios. Students will be introduced to 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 II

Prerequisite: Accounting and Finance I

This course is a continuation of Accounting and Finance I. 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 analysis of financial reports such as profit and loss statements, cash flow statements and pro forma statements. Ethics and regulations will be 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 II

This course is offered to students who have achieved all content standards in a program and desire 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.

CTE Work Experience – Finance

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
FINANCE

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Accounting and Finance I	ACCT FINANCE I	52.0304	1	N	12104
Accounting and Finance II	ACCT FINANCE II	52.0304	1	N	12104
Accounting and Finance Advanced Studies	ACCT FINANCE AS	52.0304	1	N	12104
CTE Work Experience - Finance	WORK EXPER FINANCE	99.0006	1	N	12148

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR GOVERNMENT AND PUBLIC ADMINISTRATION

This Career Cluster® is focused on planning and performing government functions at the local, state, and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.

- Military Science

PROGRAM DESCRIPTIONS
GOVERNMENT AND 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.

PROGRAM COURSE SEQUENCES
GOVERNMENT AND PUBLIC ADMINISTRATION

Program Name	Course Sequence	State Skill Standards*
Military Science	Core Course Sequence Military Science I Military Science II Military Science III Complementary Course(s) Military Science Advanced Studies	Military Science

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

COURSE DESCRIPTIONS

GOVERNMENT AND 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 Advanced Studies

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.

COURSE DATA INFORMATION
GOVERNMENT AND PUBLIC ADMINISTRATION

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Military Science I	MIL SCI I	28.0503	1	F	09002
Military Science II	MIL SCI II	28.0503	1	F	09002
Military Science III	MIL SCI III	28.0503	1	F	09002
Military Science Advanced Studies	MIL SCI AS	28.0503	1	F	09002

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR HEALTH SCIENCE

This Career Cluster® is focused on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

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

PROGRAM DESCRIPTIONS

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, and 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 the Health Insurance Portability and Accountability Act (HIPAA) and responsibilities of medical office staff and 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 Board 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.

Practical Nursing

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

The Practical Nursing program provides students with the knowledge and skills required for entry into the healthcare field. The program provides skills in patient care, pharmacology, family nursing, psychosocial behavior, and other designated areas of nursing. Students completing the didactic and clinical practicum are eligible for the Nevada State Board of Nursing transition into a Licensed Practical Nurse.

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.

PROGRAM 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 CTE Work Experience – Health Science	Biomedical
Community Health Science	Core Course Sequence Principles of Health Science Community Health Science Complementary Course(s) Community Health Science Advanced Studies CTE Work Experience – Health Science	Principles of Health Science <i>and</i> Community Health Science
Dental Science	Core Course Sequence Dental Science I Dental Science II Dental Science III Complementary Course(s) Dental Science Advanced Studies CTE Work Experience – Health Science	Dental Science
Emergency Medical Technician	Core Course Sequence Health Science I Health Science II or Emergency Medical Services Emergency Medical Technician Complementary Course(s) Emergency Medical Technician LAB ** CTE Work Experience – Health Science	Health Science I and II <i>and</i> Emergency Medical Technician
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 CTE Work Experience – Health Science	Health Science I and II <i>and</i> 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 CTE Work Experience – Health Science	Health Science I and II <i>and</i> Medical Assisting

* 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.

HEALTH SCIENCE
(CONTINUED)

Program Name	Course Sequence	State Skill Standards*
Nursing Assistant	Core Course Sequence Principles of Health Science Nursing Assistant Complementary Course(s) Nursing Assistant LAB ** CTE Work Experience – Health Science	Principles of Health Science <i>and</i> 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 CTE Work Experience – Health Science	Health Science I and II <i>and</i> Pharmacy Practice
Practical Nursing	Core Course Sequence Practical Nursing I Practical Nursing II Complementary Course(s) Practical Nursing II LAB** Practical Nursing Advanced Studies CTE Work Experience – Health Science	Practical Nursing
Respiratory Science	Core Course Sequence Respiratory Science I Respiratory Science II Respiratory Science III Complementary Course(s) Respiratory Science Advanced Studies CTE Work Experience – Health Science	Respiratory Science
Sports Medicine	Core Course Sequence Principles of Health Science Sports Medicine Complementary Course(s) Sports Medicine Advanced Studies CTE Work Experience – Health Science	Principles of Health Science <i>and</i> 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.

COURSE DESCRIPTIONS

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 lifestyle 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 and desire 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: Principles of Health Science

This course is designed to provide students with knowledge and skills required for entry into the healthcare field that includes community health worker, biostatistics, epidemiology, public health, substance abuse, person health, cellular and molecular biology, and environmental health. 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 skill 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 and desire 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 and desire 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

Prerequisite: Health Science II or Emergency Medical Services

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

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

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 CPT 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 and desire 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 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 or Medical Terminology

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 and desire 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

Prerequisite: Principles of Health Science

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

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 and desire 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.

Practical Nursing I

Prerequisite: None

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

This course introduces the principles and procedures employed in nursing. Students will practice nursing and patient role and responsibilities, implement pharmacological therapies, study anatomy and physiology, and will learn how to provide a safe and effective care environment. 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 nursing.

Practical Nursing II

Prerequisite: Practical Nursing I

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

This course is a continuation of Practical Nursing I. This course provides nursing students with instruction in advanced techniques and critical thinking. This course provides instruction in the practical areas of clinical judgement, psychosocial integrity, physiological development, family nursing, and the transition to a licensed practical nurse. The appropriate use of technology and industry-standard equipment is an integral part of this course.

Practical Nursing II LAB

Prerequisite: Concurrent enrollment in Practical Nursing 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.

Practical Nursing Advanced Studies

Prerequisite: Practical Nursing II

This course is offered to students who have achieved all content standards in a program and desire 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 Health Science

Prerequisite: None

The 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. Students will demonstrate skills in cardiopulmonary resuscitation (CPR) and first aid. The appropriate use of technology and industry-standard equipment is an integral part of this course.

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 and desire 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

Prerequisite: Principles of Health Science

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, anatomy and physiology, kinesiology, injury evaluation and prevention procedures, and careers in sports medicine. Students will demonstrate skills in first aid and sports injury management and rehabilitation. The appropriate use of technology and industry-standard equipment is an integral part of the course.

Sports Medicine Advanced Studies

Prerequisite: Sports Medicine

This course is offered to students who have achieved all content standards in a program and desire 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.

CTE Work Experience – Health Science

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
HEALTH SCIENCE

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Biomedical I	BIOMED I	26.0102	1	N	14255
Biomedical II	BIOMED II	26.0102	1	N	14255
Biomedical III	BIOMED III	26.0102	1	N	14255
Biomedical Advanced Studies	BIOMED AS	26.0102	1	N	14255
Community Health Science	CMTY HLTH SCI	51.2208	1	N	08053
Community Health Science Advanced Studies	CMTY HLTH SCI AS	51.2208	1	N	08053
Dental Science I	DENTAL SCI I	51.0601	1	M	14054
Dental Science II	DENTAL SCI II	51.0601	1	M	14054
Dental Science III	DENTAL SCI III	51.0601	1	M	14054
Dental Assisting Advanced Studies	DENTAL SCI AS	51.0601	1	M	14054
Emergency Medical Services	EMER MED SERVICES	51.0810	1	N	14055
Emergency Medical Technician	EMER MED TECH	51.0904	1	N	14055
Emergency Medical Technician LAB	EMER MED TECH L	51.0904	1	N	14055
Health Information Management I	HLTH INFO MGMT I	51.0707	1	M	14157
Health Information Management II	HLTH INFO MGMT II	51.0707	1	M	14157
Health Information Management Advanced Studies	HLTH INFO MGMT AS	51.0707	1	M	14157
Health Science I	HEALTH SCI I	51.0000	1	N	14251
Health Science II	HEALTH SCI II	51.0000	1	N	14251
Medical Assisting	MEDICAL ASST	51.0801	1	M	14151
Medical Assisting LAB	MEDICAL ASST L	51.0801	1	M	14151
Medical Assisting Advanced Studies	MEDICAL ASST AS	51.0801	1	M	14151
Medical Terminology	MEDICAL TERM	51.0899	1	N	14154
Nursing Assistant	NURSING ASST	51.3902	1	M	14051
Nursing Assistant LAB	NURSING ASST L	51.3902	1	M	14051
Pharmacy Practice	PHARMACY PRACT	51.0805	1	M	14152
Pharmacy Practice Advanced Studies	PHARMACY PRACT AS	51.0805	1	M	14152
Practical Nursing I	PRAC NURS I	51.3901	1	M	14052
Practical Nursing II	PRAC NURS II	51.3901	1	M	14052
Practical Nursing II LAB	PRAC NURS II L	51.3901	1	M	14052
Practical Nursing Advanced Studies	PRAC NURS AS	51.3901	1	M	14052
Principles of Health Science	PRN HEALTH SCI	51.0000	1	N	14002
Respiratory Science I	RESP SCI I	51.0908	1	N	14061
Respiratory Science II	RESP SCI II	51.0908	1	N	14061
Respiratory Science III	RESP SCI III	51.0908	1	N	14061
Respiratory Science Advanced Studies	RESP SCI AS	51.0908	1	N	14061

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HEALTH SCIENCE
(CONTINUED)

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Sports Medicine	SPORTS MED	51.0913	1	N	14062
Sports Medicine Advanced Studies	SPORTS MED AS	51.0913	1	N	14062
CTE Work Experience - Health Science	WORK EXPER HEALTH	99.0008	1	N	14298

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PROGRAM ALIGNMENT FOR HOSPITALITY AND TOURISM

This Career Cluster® is focused on management, marketing, and operations of restaurants and other food services, lodging, attractions, recreation events, and travel related services.

- Baking and Pastry
- Culinary Arts
- Hospitality and Tourism



PROGRAM DESCRIPTIONS
HOSPITALITY AND TOURISM

Baking and Pastry

The Baking and Pastry program provides students with an in-depth study of the 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 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 model industry standards.

Hospitality and Tourism

The Hospitality and 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.

PROGRAM COURSE SEQUENCES
HOSPITALITY AND 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 CTE Work Experience – Hospitality and Tourism	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 CTE Work Experience – Hospitality and Tourism	Culinary Arts
Hospitality and 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 CTE Work Experience – Hospitality and Tourism	Hospitality and Tourism
National Academy Foundation Academy of Hospitality and 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 CTE Work Experience – Hospitality and Tourism	Hospitality and 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.

◇ Course description listed in the Human Services-section.

COURSE DESCRIPTIONS

HOSPITALITY AND 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. 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.

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 and desire 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 arts 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 and desire 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 and desire 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 and 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.

CTE Work Experience – Hospitality and Tourism

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
HOSPITALITY AND TOURISM

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Baking and Pastry I	BAKING I	12.0501	1	F	16056
Baking and Pastry I LAB	BAKING I L	12.0501	1	F	16056
Baking and Pastry II	BAKING II	12.0501	1	F	16056
Baking and Pastry II LAB	BAKING II L	12.0501	1	F	16056
Baking and Pastry Advanced Studies	BAKING AS	12.0501	1	F	16056
Culinary Arts I	CUL ARTS I	12.0503	1	F	16053
Culinary Arts II	CUL ARTS II	12.0503	1	F	16053
Culinary Arts II LAB	CUL ARTS II L	12.0503	1	F	16053
Culinary Arts III	CUL ARTS III	12.0503	1	F	16053
Culinary Arts III LAB	CUL ARTS III L	12.0503	1	F	16053
Culinary Arts Advanced Studies	CUL ARTS AS	12.0503	1	F	16053
Hospitality and Tourism I	HOSPLTY TOUR I	52.0901	1	N	16001
Hospitality and Tourism II	HOSPLTY TOUR II	52.0901	1	N	16001
Hospitality and Tourism II LAB	HOSPLTY TOUR II L	52.0901	1	N	16001
Hospitality and Tourism III	HOSPLTY TOUR III	52.0901	1	N	16001
Hospitality and Tourism III LAB	HOSPLTY TOUR III L	52.0901	1	N	16001
Hospitality and Tourism Advanced Studies	HOSPLTY TOUR AS	52.0901	1	N	16001
NAF-Customer Service	NAF CUSTOMER SERV	52.0207	0.5	N	16001
NAF-Geography for Tourism	NAF GEO TOURISM	52.1906	0.5	N	16001
NAF-Hospitality Marketing	NAF HOSPLTY MKTG	52.1910	0.5	N	16001
NAF-Principles of Hospitality and Tourism	NAF PRIN HOSPLTY	52.0901	0.5	N	16001
NAF-Sports, Entertainment and Event Planning	NAF EVENT PLANNING	52.0907	0.5	M	16001
NAF-Sustainable Tourism	NAF SUSTAIN TOUR	52.1999	0.5	N	16001
CTE Work Experience - Hospitality and Tourism	WORK EXPER HOSP	99.0009	1	N	16198

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PROGRAM ALIGNMENT FOR HUMAN SERVICES

This Career Cluster® is focused on preparing individuals for employment in careers that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.

- Cosmetology
 - Family and Consumer Sciences
 - Foods and Nutrition
 - Human and Social Services
 - Human Development
-

PROGRAM DESCRIPTIONS

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 1,800-hour requirement for licensure. Students have an opportunity to earn 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.

Family and Consumer Sciences

The Family and Consumer Sciences program provides instruction in Family and Consumer Sciences topics to prepare students for adult roles and responsibilities. The major focus is on developing skills for balancing home, work, and life by studying how to be successful with life management, wealth management, family development, home management, health and fitness, and leadership and community participation.

Foods and 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 and Social Services

The Human and Social Services program provides students with opportunities to learn about occupations in Human Services. Areas of study include Consumer Services, Counseling and Mental Health Services, Early Childhood Development and Services, Family and Community Services and Personal Care Services.

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
HUMAN SERVICES

Program Name	Course Sequence	State Skill Standards*
Cosmetology	Core Course Sequence Principles of Cosmetology Cosmetology I Cosmetology II Complementary Course(s) CTE Work Experience – Human Services	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 ◊◊ CTE Work Experience – Human Services	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 CTE Work Experience – Human Services	Foods and Nutrition
Human and Social Services	Core Course Sequence Human and Social Services I Human and Social Services II Complementary Course(s) Human and Social Services Advanced Studies CTE Work Experience – Human Services	Human and Social Services
Human Development	Core Course Sequence Human Development I Human Development II Human Development III Complementary Course(s) Human Development Advanced Studies CTE Work Experience – Human Services	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.

◊◊ Course description listed in the Architecture and Construction Section.

COURSE DESCRIPTIONS

HUMAN SERVICES

Cosmetology I

Prerequisite: Principles of Cosmetology

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

The six-credit-block course is designed to prepare students for the Nevada State Board of Cosmetology Licensing Exam and to meet the 1,800-hour requirement for licensure. Students have an opportunity to earn 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

Prerequisite: Cosmetology I

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

The six-credit-block course is designed to prepare students for the Nevada State Board of Cosmetology Licensing Exam and to meet the 1,800-hour requirement for licensure. Students have an opportunity to earn 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. A goal of the program is to provide a real-work environment where students work on the public to practice and master those skills necessary for success in the workplace. Emphasis is also placed on job seeking/keeping skills, such as effective communication, customer service, teamwork, filling out a job application, building a resume, and interviewing techniques. 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 and Foods and Nutrition I and 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 introduces 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-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 Advanced Studies

Prerequisite: Foods and Nutrition III

This course is offered to students who have achieved all content standards in a program and desire 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 and Social Services I

Prerequisite: None

This course provides students with an introduction to Human Services professions. This course addresses the roles and responsibilities, skills, behaviors, and knowledge needed to provide services in a variety of careers. The appropriate use of technology and industry-standard equipment is an integral part of this course. Students will begin to develop a career portfolio.

Human and Social Services II

Prerequisite: Human and Social Services I

This course is a continuation of Human and Social Services I. Students will continue to develop skills and strategies for social services-based careers. Project-based learning experiences will include planning and implementing activities following requirements of a variety of workplace environments. The appropriate use of technology and industry-standard equipment is an integral part of this course. Students will expand their career portfolio.

Human and Social Services Advanced Studies

Prerequisite: Human and Social Services II

This course is offered to students who have achieved all content standards in a program and desire 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 and desire 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

Prerequisite: None

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

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.

CTE Work Experience – Human Services

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
HUMAN SERVICES

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Cosmetology I	COSMO I	12.0401	6	M	19101
Cosmetology II	COSMO II	12.0401	6	M	19101
Family and Consumer Sciences	FACS	19.0101	1	N	19251
Foods and Nutrition I	FOODS I	19.0501	1	M	19252
Foods and Nutrition II	FOODS II	19.0501	1	M	19252
Foods and Nutrition III	FOODS III	19.0501	1	M	19252
Foods and Nutrition Advanced Studies	FOODS AS	19.0501	1	M	19252
Human Development I	HUMAN DEVLOP I	19.0701	1	M	19261
Human Development II	HUMAN DEVLOP II	19.0701	1	M	19261
Human Development III	HUMAN DEVLOP III	19.0701	1	M	19261
Human Development Advanced Studies	HUMAN DEVLOP AS	19.0701	1	M	19261
Human and Social Services I	HSS I	13.1101	1	M	19301
Human and Social Services II	HSS II	13.1101	1	M	19301
Human and Social Services Advanced Studies	HSS AS	13.1101	1	M	19301
Principles of Cosmetology	PRIN COSMO	12.0401	1	M	19101
CTE Work Experience – Human Services	WORK EXPER HU SERV	99.0010	1	M	19998

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PROGRAM ALIGNMENT FOR INFORMATION TECHNOLOGY

This Career Cluster® is focused on building linkages in information technology occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

- Animation
 - Computer Science
 - Cybersecurity
 - Digital Game Development
 - Information Technology Networking
 - Web Design and Development
-

PROGRAM DESCRIPTIONS

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.

Information Technology Networking

The Information Technology Networking program provides students with concepts in computer networking based on Cisco Systems and prepares students for Cisco certifications. Areas of study include safety procedures, network system hardware, network protocols, routing and switching, and constructing and maintaining a network.

Web Design and 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
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 CTE Work Experience – Information Technologies	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 CTE Work Experience – Information Technologies	Computer Science
Cybersecurity	Core Course Sequence Cybersecurity I Cybersecurity II Cybersecurity III Complementary Course(s) Cybersecurity Advanced Studies CTE Work Experience – Information Technologies	Cybersecurity
Digital Game Development	Core Course Sequence Digital Game Development I Digital Game Development II Complementary Course(s) Digital Game Development II LAB ** Digital Game Development Advanced Studies CTE Work Experience – Information Technologies	Digital Game Development
Information Technology Networking	Core Course Sequence CISCO IT Essentials/Intro to Cybersecurity CISCO-CCNA I Introduction to Networking CISCO-CCNA II Routing and Switching Essentials Complementary Course(s) IT Networking Advanced Studies CTE Work Experience – Information Technologies	Information Technology Networking
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 CTE Work Experience – Information Technologies	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

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 students' 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 students' 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 students' 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 and desire 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 (AP) 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 programming 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 programming 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 A

This course is offered to students who have achieved all content standards in a program and desire 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), inter-VLAN 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 and desire 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 Advanced Studies

Prerequisite: Digital Game Development II

This course is offered to students who have achieved all content standards in a program and desire 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 Advanced Studies

Prerequisite: CISCO-CCNA II Routing and Switching Essentials

This course is offered to students who have achieved all content standards in a program and desire 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.

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 and desire 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.

CTE Work Experience – Information Technology

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
INFORMATION TECHNOLOGY***

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Animation I	ANIMATE I	10.0304	1	N	05177
Animation II	ANIMATE II	10.0304	1	N	05177
Animation II LAB	ANIMATE II L	10.0304	1	N	05177
Animation III	ANIMATE III	10.0304	1	N	05177
Animation III LAB	ANIMATE III L	10.0304	1	N	05177
Animation Advanced Studies	ANIMATE AS	10.0304	1	N	05177
AP Computer Science A	AP COMPUTER SCI A	11.0701	1	F	10157
AP Computer Science Principles	AP COMP SCI PRIN	11.0701	1	F	10019
Cisco IT Essentials	CISCO IT ESST	11.1002	.5	F	10102
Cisco Introduction to Cybersecurity	CISCO IT CYBR	11.1002	.5	F	10102
CCNA I Introduction to Networking	CISCO CCNA I	11.1002	1	F	10102
CCNA II Routing and Switching Essentials	CISCO CCNA II	11.1002	1	F	10102
Computer Science I	COMPUTER SCI I	11.0701	1	F	10011
Computer Science II	COMPUTER SCI II	11.0701	1	F	10011
Computer Science II LAB	COMPUTER SCI II L	11.0701	1	F	10011
Computer Science III	COMPUTER SCI III	11.0701	1	F	10011
Computer Science III LAB	COMPUTER SCI III L	11.0701	1	F	10011
Computer Science Advanced Studies	COMPUTER SCI AS	11.0701	1	F	10011
Cybersecurity I	CYBRSECU I	11.1001	1	F	10108
Cybersecurity II	CYBRSECU II	11.1001	1	F	10108
Cybersecurity III	CYBRSECU III	11.1001	1	F	10108
Cybersecurity Advanced Studies	CYBRSECU AS	11.1001	1	F	10108
Digital Game Development I	DIG GAME DEV I	50.0411	1	N	10205
Digital Game Development II	DIG GAME DEV II	50.0411	1	N	10205
Digital Game Development II LAB	DIG GAME DEV II L	50.0411	1	N	10205
Digital Game Development Advanced Studies	DIG GAME DEV AS	50.0411	1	N	10205
IT Networking Advanced Studies	IT NETWKNG AS	11.1002	1	F	10102
Web Design and Development I	WEB DESG DEV I	11.0801	1	N	10201
Web Design and Development II	WEB DESG DEV II	11.0801	1	N	10201
Web Design and Development II LAB	WEB DESG DEV II L	11.0801	1	N	10201
Web Design and Development III	WEB DESG DEV III	11.0801	1	N	10201
Web Design and Development III LAB	WEB DESG DEV III L	11.0801	1	N	10201
Web Design and Development Advanced Studies	WEB DESG DEV AS	11.0801	1	N	10201
CTE Work Experience – Information Technology	WORK EXPER IT	99.0011	1	F	10298

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY

This Career Cluster® is focused on planning, managing, and providing legal, public safety and protective services and homeland security, including professional and technical support services.

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

PROGRAM DESCRIPTIONS
LAW, PUBLIC SAFETY, CORRECTIONS, AND 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 an 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 related to safety, fire behavior, suppression, ventilation, building construction, awareness of hazardous materials, medical care, and wildland firefighting.

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
LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY

Program Name	Course Sequence	State Skill Standards*
Criminal Justice	Core Course Sequence Criminal Justice I Criminal Justice II Criminal Justice III Complementary Course(s) Criminal Justice Advanced Studies CTE Work Experience – Law, Public Safety, Corrections, and Security	Criminal Justice
Emergency Telecommunications	Core Course Sequence Emergency Telecommunications I Emergency Telecommunications II Complementary Course(s) Emergency Telecommunications II LAB ** Emergency Telecommunications Advanced Studies CTE Work Experience – Law, Public Safety, Corrections, and Security	Emergency Telecommunications
Fire Science	Core Course Sequence Fire Science I Fire Science II Complementary Course(s) Fire Science Advanced Studies CTE Work Experience – Law, Public Safety, Corrections, and Security	Fire Science
Forensic Science	Core Course Sequence Forensic Science I Forensic Science II Complementary Course(s) Forensic Science Advanced Studies CTE Work Experience – Law, Public Safety, Corrections, and Security	Forensic Science
Law Enforcement	Core Course Sequence Law Enforcement I Law Enforcement II Law Enforcement III Complementary Course(s) Law Enforcement Advanced Studies CTE Work Experience – Law, Public Safety, Corrections, and Security	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

LAW, PUBLIC SAFETY, CORRECTIONS AND 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 an 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

This course is a continuation of Criminal Justice I. 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 continue developing 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 and desire 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 National Academies of Emergency Dispatch (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.

Emergency Telecommunications Advanced Studies

Prerequisite: Emergency Telecommunications II

This course is offered to students who have achieved all content standards in a program and desire 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.

Fire Science I

Prerequisite: None

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

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 firefighter safety, fire behavior, personal protective equipment, building construction, service equipment, 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

Prerequisite: Fire Science I

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

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, suppression, ventilation, water supply, loss control, medical care, and awareness of 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: Fire Science II

This course is offered to students who have achieved all content standards in a program and desire 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 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 is 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

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, examination of evidence, and fingerprinting processes. The appropriate use of technology and industry-standards equipment is an integral part of this course.

Forensic Science Advanced Studies

Prerequisite: Forensic Science II

This course is offered to students who have achieved all content standards in a program and desire 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.

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

This course is a continuation of Law Enforcement I. 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 and desire 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.

CTE Work Experience – Law, Public Safety, Corrections, and Security

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Criminal Justice I	CRIMINAL JUST I	43.0104	1	F	15051
Criminal Justice II	CRIMINAL JUST II	43.0104	1	F	15051
Criminal Justice III	CRIMINAL JUST III	43.0104	1	F	15051
Criminal Justice Advanced Studies	CRIMINAL JUST AS	43.0104	1	F	15051
Emergency Telecommunications I	EMER TELECOMM I	43.0399	1	F	15104
Emergency Telecommunications II	EMER TELECOMM II	43.0399	1	F	15104
Emergency Telecommunications II LAB	EMER TELECOMM II L	43.0399	1	F	15104
Emergency Telecommunications Advanced Studies	EMER TELECOMM AS	43.0399	1	F	15104
Fire Science I	FIRE SCI I	43.0203	1	F	15151
Fire Science II	FIRE SCI II	43.0203	1	F	15151
Fire Science Advanced Studies	FIRE SCI AS	43.0203	1	F	15151
Forensic Science I	FORENSIC SCI I	43.0406	1	N	15055
Forensic Science II	FORENSIC SCI II	43.0406	1	N	15055
Forensic Science Advanced Studies	FORENSIC SCI AS	43.0406	1	N	15055
Law Enforcement I	LAW ENFORCE I	43.0107	1	F	15054
Law Enforcement II	LAW ENFORCE II	43.0107	1	F	15054
Law Enforcement III	LAW ENFORCE III	43.0107	1	F	15054
Law Enforcement Advanced Studies	LAW ENFORCE AS	43.0107	1	F	15054
CTE Work Experience – Law Public Safety Corrections and Security	WORK EXPER LAW	99.0012	1	F	15998

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR MANUFACTURING

This Career Cluster® is focused on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing, and process engineering.

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

PROGRAM DESCRIPTIONS

MANUFACTURING

Automation Technology

The Automation Technology program introduces students to the fundamentals of automation. Areas of study include safety, tools, the engineering design process, 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, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), gas tungsten arc welding (GTAW), and thermal cutting.

PROGRAM COURSE SEQUENCES
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 CTE Work Experience - Manufacturing	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 CTE Work Experience - Manufacturing	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 CTE Work Experience - Manufacturing	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 CTE Work Experience - Manufacturing	Mechanical Technology
Metalworking	Core Course Sequence Metalworking I Metalworking II Metalworking III Complementary Course(s) Metalworking Advanced Studies CTE Work Experience - Manufacturing	Metalworking

* 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
(CONTINUED)

Program Name	Course Sequence	State Skill Standards*
Welding Technology	Core Course Sequence Welding Technology I Welding Technology II Complementary Course(s) Welding Technology II LAB ** Welding Technology Advanced Studies CTE Work Experience - Manufacturing	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.

COURSE DESCRIPTIONS

MANUFACTURING

Automation Technology I

Prerequisite: None

This course introduces students to the fundamentals of automation technologies. Areas of emphasis include lab safety, the engineering design process, power systems, basic automation systems, and basic automation control devices.

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

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 and desire 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 II

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 and desire 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 and desire 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. Advanced welding methods will be presented as well as career awareness and opportunities in the metals industries. 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 basic 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 in this field.

Metalworking Advanced Studies

Prerequisite: Metalworking III

This course is offered to students who have achieved all content standards in a program and desire 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 various Welding Certifications. 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, hand and power tools, safety procedures, print reading, measuring and scaling techniques, machine operation, industrial applications including Shielded Metal Arc Welding (SMAW) and Thermal Cutting processes, and provide them with entry-level skills for employment.

Welding Technology II

Prerequisite: Welding Technology I

This course is a continuation of Welding Technology I. This course provides intermediate welding students the ability to augment and further their skill and knowledge levels. Areas of study will include advanced layout and fabrication methodologies, continuation of shielded metal arc welding (SMAW) and thermal cutting processes, fabrication techniques and Gas Metal Arc Welding (GMAW) welding and GMAW Spray transfer on Carbon Steel, Flux Cored Arc Welding (FCAW) and FCAW spray transfer on carbon steel, and Gas Tungsten Arc Welding (GTAW) on carbon steel. All student activities are designed to enhance students' skill levels toward achievement of various welding certifications. 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 Advanced Studies

Prerequisite: Welding Technology II

This course is offered to students who have achieved all content standards in a program and desire 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.

CTE Work Experience – Manufacturing

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
MANUFACTURING

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

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

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PROGRAM ALIGNMENT FOR MARKETING

This Career Cluster® is focused on planning, managing, and performing marketing activities to reach organizational objectives.

- Marketing



PROGRAM DESCRIPTION
MARKETING

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
MARKETING

Program Name	Course Sequence	State Skill Standards*
Marketing	Core Course Sequence Principles of Business and Marketing Marketing I Complementary Course(s) Marketing Advanced Studies CTE Work Experience – Marketing	Marketing

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

COURSE DESCRIPTIONS**MARKETING****Marketing I**

Prerequisite: Principles of Business and Marketing

This course is a continuation of the Marketing program. 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 Advanced Studies

Prerequisite: Marketing I

This course is offered to students who have achieved all content standards in a program and desire 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 and 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 skills, and participate in career exploration and planning.

CTE Work Experience – Marketing

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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

MARKETING

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Marketing I	MKTG I	52.1401	1	N	12152
Marketing Advanced Studies	MKTG AS	52.1401	1	N	12152
Principles of Business and Marketing	PRIN BUS MKTG	52.0101	1	F	12051
CTE Work Experience – Marketing	WORK EXPER MARKET	99.0014	1	N	12198

Due to the Implementation of SCED, we have phased out the use of Level Codes. Please see CTE SCED Directory for additional information on CTE SECD, Levels, and other data elements. Please ensure that your district's SCED sequencing is correctly entered into IC to ensure data pulls are accurate.

PROGRAM ALIGNMENT FOR SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

This Career Cluster® is focused on planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

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

PROGRAM DESCRIPTIONS
SCIENCE, TECHNOLOGY, ENGINEERING AND 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 and 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 engineering design process, various energy sources, energy forms, energy principles, efficiency concepts, electricity, and electrical principles. In addition, construct energy systems, model the uses of various sources of energy and energy efficiency and conservation will be explored in this program.

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.

PROGRAM COURSE SEQUENCES
SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

Program Name	Course Sequence	State Skill Standards*
Aerospace Engineering	Core Course Sequence Introduction to Engineering Design Principles of Engineering Aerospace Engineering Complementary Course(s) Engineering Design and Development CTE Work Experience – Science, Technology, Engineering, and Mathematics	Aerospace Engineering
Architectural and Civil Engineering	Core Course Sequence Introduction to Engineering Design Principles of Engineering Civil Engineering and Architecture Complementary Course(s) Engineering Design and Development CTE Work Experience – Science, Technology, Engineering, and Mathematics	Architectural and Civil Engineering
Electrical Engineering	Core Course Sequence Introduction to Engineering Design Principles of Engineering Digital Electronics Complementary Course(s) Engineering Design and Development CTE Work Experience – Science, Technology, Engineering, and Mathematics	Electrical Engineering
Energy Technologies	Core Course Sequence Energy Technologies I Energy Technologies II Complementary Course(s) Energy Technologies Advanced Studies CTE Work Experience – Science, Technology, Engineering, and Mathematics	Energy Technologies
Environmental Engineering	Core Course Sequence Introduction to Engineering Design Principles of Engineering Environmental Sustainability Complementary Course(s) Engineering Design and Development CTE Work Experience – Science, Technology, Engineering, and Mathematics	Environmental Engineering
Mechanical Engineering	Core Course Sequence Introduction to Engineering Design Principles of Engineering Computer Integrated Manufacturing Complementary Course(s) Engineering Design and Development CTE Work Experience – Science, Technology, Engineering, and Mathematics	Mechanical Engineering

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

COURSE DESCRIPTIONS

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

Aerospace Engineering

Prerequisite: Principles of Engineering

This course is a continuation of the 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.

Civil Engineering and Architecture

Prerequisite: Principles of Engineering

This course is a continuation of the 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.

Computer Integrated Manufacturing

Prerequisite: Principles of Engineering

This course is a continuation of the 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.

Digital Electronics

Prerequisite: Principles of Engineering

This course is a continuation of the 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.

Energy Technologies I

Prerequisite: None

This course introduces students to the energy 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 apply the engineering design process to technologies to explore energy principles. Students will be introduced to career opportunities and necessary job skills related to the various forms of energy.

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. 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.

Energy Technologies Advanced Studies

Prerequisite: Energy Technologies II

This course is offered to students who have achieved all content standards in a program and desire 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.

Engineering Design and Development

Prerequisite: Aerospace Engineering or Environmental Sustainability or Civil Engineering and Architecture or Computer Integrated Manufacturing or Digital Electronics

This course is the capstone course of the 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.

Environmental Sustainability

Prerequisite: Principles of Engineering

This course is a continuation of the 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.

Introduction to Engineering Design

Prerequisite: None

This course is the entry-level course of the 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.

Principles of Engineering

Prerequisite: Introduction to Engineering Design

This course is a continuation of the Engineering curriculum. This survey course exposes students to major concepts they will encounter in a postsecondary 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.

CTE Work Experience – Science Technology Engineering Mathematics

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Aerospace Engineering	AEROSPACE ENG	14.0201	1	F	21019
Civil Engineering and Architecture	CIVIL ENG	14.0401	1	F	21021
Computer Integrated Manufacturing	COMP INT MFG	14.1901	1	F	21022
Digital Electronics	DIG ELEC	15.0303	1	F	21023
Energy Technologies I	ENERGY TECH I	15.1701	1	F	03012
Energy Technologies II	ENERGY TECH II	15.1701	1	F	03012
Energy Technologies Advanced Studies	ENERGY TECH AS	15.1701	1	F	03012
Engineering Design and Development	ENG DESG DEV	14.0101	1	F	21025
Environmental Sustainability	ENVIRON SUS	14.0501	1	F	21024
Introduction to Engineering Design	ENG DESG	14.0101	1	F	21017
Principles of Engineering	PRIN ENG	14.0101	1	F	21018
CTE Work Experience – Science Technology Engineering Mathematics	WORK EXPER STEM	99.0015	1	F	21998

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PROGRAM ALIGNMENT FOR TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

This Career Cluster® is focused on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance.

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

PROGRAM DESCRIPTIONS
TRANSPORTATION, DISTRIBUTION AND 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 National Automotive Technicians Education Foundation (NATEF) Automobile Service Technology (AST) program standards. The program must be certified and follow the national NATEF - AST program standards and requirements of Automotive Youth Education Systems (AYES).

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 and 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 students to the principles of flight, the aircraft flight environment, aircraft performance standards, flight controls, metrology, radio communications, flight planning, Federal Aviation Administration (FAA) regulations, navigation, the human body in flight, airman decision-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.

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
TRANSPORTATION, DISTRIBUTION, AND 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 ** CTE Work Experience – Transportation, Distribution, and Logistics	Automotive Service Technician
Automotive Technology	Core Course Sequence Automotive Technology I Automotive Technology II Complementary Course(s) Automotive Technology III Automotive Technology II LAB Automotive Technology III LAB Automotive Technology Advanced Studies CTE Work Experience – Transportation, Distribution, and Logistics	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 CTE Work Experience – Transportation, Distribution, and Logistics	Aviation Maintenance Technician
Aviation Technology	Core Course Sequence Aviation Technology I Aviation Technology II Aviation Technology III Complementary Course(s) Aviation Technology Advanced Studies CTE Work Experience – Transportation, Distribution, and Logistics	Aviation 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 CTE Work Experience – Transportation, Distribution, and Logistics	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

TRANSPORTATION, DISTRIBUTION AND 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 Automotive Youth Education Systems (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 Service Technician II

Prerequisite: Automotive Service Technician I

This course is a continuation of Automotive Service Technician I. This course provides intermediate automotive service technician 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 service technician 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 service technician 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 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. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

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 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 by providing additional instruction in the ASE standard areas. 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 received advanced level skills to move into employment or continue in 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 and desire 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 preventative 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 Aviation Maintenance Technician I and II. Areas of study include an introduction to aircraft systems. Discussions include a study of the principles and concepts of basic DC and AC electrical theory, magnetism, batteries, generators, motors, voltage regulators, circuit protection, and electrical component installations (Federal Aviation Regulations [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.

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 and desire 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, Federal Aviation Administration (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 Airframe and Powerplant (A&P) technician for the electrical portion of the Oral and Practical Exam in obtaining an FAA certified license. It provides 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. Students 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, students 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 students to successfully take the Federal Aviation Administration (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 and desire 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 and desire 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.

CTE Work Experience – Transportation, Distribution and Logistics

Prerequisite: Level 1 course and concurrently enrolled in the Level 2 or higher course

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE 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
TRANSPORTATION, DISTRIBUTION AND LOGISTICS

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Automotive Service Technician I	AUTO SERV I	47.0604	1	F	20106
Automotive Service Technician II	AUTO SERV II	47.0604	1	F	20106
Automotive Service Technician II LAB	AUTO SERV II L	47.0604	1	F	20106
Automotive Service Technician III	AUTO SERV III	47.0604	1	F	20106
Automotive Service Technician III LAB	AUTO SERV III L	47.0604	1	F	20106
Automotive Service Technician IV	AUTO SERV IV	47.0604	1	F	20106
Automotive Service Technician IV LAB	AUTO SERV IV L	47.0604	1	F	20106
Automotive Technology I	AUTO TECH I	47.0600	1	F	20104
Automotive Technology II	AUTO TECH II	47.0600	1	F	20104
Automotive Technology II LAB	AUTO TECH II L	47.0600	1	F	20104
Automotive Technology III	AUTO TECH III	47.0600	1	F	20104
Automotive Technology III LAB	AUTO TECH III L	47.0600	1	F	20104
Automotive Technology Advanced Studies	AUTO TECH AS	47.0600	1	F	20104
Aviation Maintenance Technician I	AVI MAINT TECH I	47.0608	1	F	20113
Aviation Maintenance Technician II	AVI MAINT TECH II	47.0608	1	F	20113
Aviation Maintenance Technician III	AVI MAINT TECH III	47.0608	1	F	20113
Aviation Maintenance Technician Advanced Studies	AVI MAINT TECH AS	47.0608	1	F	20113
Aviation Technology I	AVIATION TECH I	49.0101	1	F	20053
Aviation Technology II	AVIATION TECH II	49.0101	1	F	20053
Aviation Technology III	AVIATION TECH III	49.0101	1	F	20053
Aviation Technology Advanced Studies	AVIATION TECH AS	49.0101	1	F	20053
Diesel Technology I	DIESEL TECH I	47.0605	1	F	20107
Diesel Technology II	DIESEL TECH II	47.0605	1	F	20107
Diesel Technology II LAB	DIESEL TECH II L	47.0605	1	F	20107
Diesel Technology III	DIESEL TECH III	47.0605	1	F	20107
Diesel Technology III LAB	DIESEL TECH III L	47.0605	1	F	20107
Diesel Technology Advanced Studies	DIESEL TECH AS	47.0605	1	F	20107
CTE Work Experience - Transportation Distribution and Logistics	WORK EXPER TRANS	99.0016	1	F	20998

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MIDDLE SCHOOL COURSE DESCRIPTIONS

AGRICULTURE, FOODS, AND NATURAL RESOURCES

Ag Ventures

Prerequisite: None

This one-semester course introduces middle school students to the world of agriculture and natural resources. Areas of study will include exploration of plant and animal science, food science, agricultural mechanics, and leadership development through projects and hands-on learning. Career exploration and an introduction to career and technical education programs of study are integral to the course.

ARTS, A/V TECHNOLOGY, AND COMMUNICATIONS

Digital Designers

Prerequisite: None

This one-semester course introduces middle school students to the world of digital media. Areas of study will include exploration in principles of design, photography, video, web design, and leadership development through projects and hands-on learning. Career exploration and an introduction to career and technical education programs of study are integral to the course.

BUSINESS MANAGEMENT AND ADMINISTRATION

Business Innovators

Prerequisite: None

This one-semester course introduces middle school students to the world of business through projects and hands-on learning. Areas of study include exploration of business terms, marketing concepts, entrepreneurship, and leadership development. Career exploration and an introduction to career and technical education programs of study are integral to the course.

HEALTH SCIENCE

Everyday Heroes

Prerequisite: None

This one-semester course introduces middle school students to the world of health care and first responders. Areas of study will include exploration of basic anatomy, public safety, medical concepts, first aid, and leadership through projects and hands-on learning. Career exploration and an introduction to career and technical education programs of study are integral to the course.

HUMAN DEVELOPMENT

Teening to Adulthood

Prerequisite: None

This one-semester course introduces middle school students to the world of education, hospitality, and human services. Areas of study include the exploration of foods and wellness, family dynamics, design in clothing and housing, education and care of children, and leadership development through projects and hands-on learning. Career exploration and an introduction to career and technical education programs of study are integral to the course.

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS**Building Engineers I***Prerequisite: None*

This one-semester course introduces middle school students to the world of skilled and technical sciences through hands-on projects and interactive learning. Areas of study will include exploration of tools and safety, measurement, design process, robotics, power and energy, and leadership development. Career exploration and an introduction to career and technical education programs of study are integral to the course.

Building Engineers II*Prerequisite: Building Engineers I*

This one-semester course introduces middle school students to advanced concepts in skilled and technical sciences through hands-on projects and interactive learning. Areas of study will include exploration of engineering design process, robotics, automation, power and energy, and coding. Career exploration and an introduction to career and technical education programs of study are integral to the course.

COURSE DATA INFORMATION

MIDDLE SCHOOL

COURSE TITLE	ABBREVIATED NAME	CIP CODE	CREDITS	NON-TRAD	SCED CODE
Ag Ventures (middle school)	AG VENTUR	01.0000	0.5	N	18001
Building Engineers I (middle school)	BUILDING ENG 1	15.0000	0.5	F	21052
Building Engineers II (middle school)	BUILDING ENG 2	15.0000	0.5	F	21052
Business Innovators (middle school)	BUSINES INNOV	52.0101	0.5	F	12001
Digital Designers (middle school)	DIGITAL DESI	09.0102	0.5	N	11001
Everyday Heroes (middle school)	EVER HEROES	51.0000	0.5	N	14001
Teening to Adulthood (middle school)	TEEN ADULT	19.1001	0.5	N	19001

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