

**HOUSTON INDEPENDENT SCHOOL DISTRICT
CAREER & TECHNICAL EDUCATION
COURSE CATALOG
2010-2011**

DRAFT

Middle School

Exploring Careers

PEIMS: 12700300**

Grade Placement: 7-8

The career development process is unique to every person and evolves throughout one's life. Students will use decision-making and problem-solving skills for college and career planning. Students will explore valid, reliable educational and career information to learn more about themselves and their interests and abilities. Students integrate skills from academic subjects, information technology, and interpersonal communication to make informed decisions. This course is designed to guide students through the process of investigation and in the development of a college and career achievement plan. Students will use interest inventory software or other tools to explore areas of personal interest. Students will use this information to explore educational requirements for a variety of chosen career paths. Districts have the flexibility of offering career exploration knowledge and skills in a variety of instructional arrangements.

Career Portals

PEIMS: 12700400**

Grade Placement: 7-8

The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. Students explore college and career planning within specific career cluster(s). The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Districts have the flexibility of offering career exploration knowledge and skills in a variety of instructional arrangements.

Touch System Data Entry (One-Half to One Credit)

PEIMS: 13011300

Grade placement: 9-10

Students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents.

Career Preparation I (Two to Three Credits)

PEIMS: 12701300

Grade placement: 11-12

Credit: 2-3

Career Preparation I provides opportunities for students to participate in a learning experience that combines classroom instruction with paid business and industry employment experiences and supports strong partnerships among school, business, and community stakeholders. The goal is to prepare students with a variety of skills for a fast-changing workplace. This instructional arrangement should be an advanced component of a student's individual program of study. Students are taught employability skills, which include job-specific skills applicable to their training station, job interview techniques, communication skills, financial and budget activities, human relations, and portfolio development. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

Problems and Solutions (One-Half to One Credit)

PEIMS: 12701500 Problems and Solutions I

PEIMS: 12701510 Problems and Solutions II

Grade placement: 11-12

Problems and Solutions is a project-based research course for students who have the ability to research a real-world problem. Students develop a project on a topic related to career interests, use scientific methods of investigation to conduct in-depth research, are matched with a mentor from the business or professional community, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge, skills, and technologies in a variety of settings. This course is designed to provide students an opportunity to earn one advanced measure for the Distinguished Achievement Program.



Principles of Agriculture, Food, and Natural Resources (One-Half to One Credit)

PEIMS: 13000200

Grade placement: 9-12

To be prepared for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge in agriculture. This course allows students to develop knowledge and skills regarding career opportunities, personal development, globalization, industry standards, details, practices, and expectations. To prepare for success, students need to have opportunities to learn, reinforce experience, apply, and transfer their knowledge and skills in a variety of settings.

Livestock Production (One-Half to One Credit)

PEIMS: 13000300

Grade placement: 10-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. Animal species to be addressed in his course may include, but are not limited to, beef cattle, dairy cattle, swine, sheep, goats, and poultry.

Small Animal Management (One-Half to One Credit)

PEIMS: 13000400

Grade placement: 9-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. Suggested small animals which may be included in the course of study include, but are not limited to, small mammals, amphibians, reptiles, avian, dogs, and cats.

Equine Science (One-Half to One Credit)

PEIMS: 13000500

Grade placement: 10-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in the field of animal science, students need to enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. Suggested animals which may be included in the course of study include, but are not limited to, horses, donkeys, and mules.

Veterinary Medical Applications (One Credit)

PEIMS: 13000600

Grade placement: 10-12

Required prerequisite: Livestock Production OR Small Animal Management OR Equine Science

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings. Topics covered in this course include, but are not limited to, veterinary practices as they relate to both large and small animal species.

Advanced Animal Science (One Credit)

PEIMS: 13000700

Grade placement: 12

Recommended prerequisite: a minimum of **one** credit from the courses in the Agriculture, Food, and Natural Resources cluster. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

To be prepared for careers in the field of animal science, students need to attain academic skills and knowledge, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry standards. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences.

Professional Standards in Agribusiness (One-Half to One Credit)

PEIMS: 13000800

Grade placement: 9-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in agribusiness systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to leadership development and the workplace, and develop knowledge and skills regarding agricultural career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course primarily focuses on leadership, communication, employer-employee relations, and problem solving as they relate to agribusiness.

Agribusiness Management and Marketing (One-Half to One Credit)

PEIMS: 13000900

Grade placement: 10-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in agribusiness systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to agribusiness marketing and management and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness.

Mathematical Applications in Agriculture, Food, and Natural Resources (One Credit)

PEIMS: 13001000

Grade placement: 12

Recommended prerequisite: Principles of Agriculture, Food & Natural Resources

Minimum Graduation Plan: 3rd Math w/Highly Qualified Instructor

Recommended Graduation Plan: Math Credit w/Highly Qualified Instructor if taken prior to Algebra II

Distinguished Graduation Plan: N/A

To be prepared for careers in agriculture, food, and natural resources, students must acquire technical knowledge in the discipline as well as apply academic skills in mathematics. Students should apply knowledge and skills related to mathematics, including algebra, geometry, and data analysis in the context of agriculture, food, and natural resources. To prepare for success, students are afforded opportunities to reinforce, apply, and transfer their knowledge and skills related to mathematics in a variety of contexts.

Energy and Natural Resources Technology (One-Half to One Credit)

PEIMS: 13001100

Grade placement: 10-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in the field of energy and natural resource systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to energy and natural resources and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need to have opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings. This course is designed to explore the interdependency of the public and natural resource systems related to energy production. In addition, renewable, sustainable, and environmentally friendly practices will be explored.

Advanced Environmental Technology (One Credit)

PEIMS: 13001200

Grade placement: 11-12

Recommended prerequisite: a minimum of one credit from the courses in the Agriculture, Food, and Natural Resources cluster

To be prepared for careers in environmental service systems, students need to attain academic skills and knowledge, acquire advanced technical knowledge and skills related to environmental service systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings. This course examines the interrelatedness of environmental issues and production agriculture. Students evaluate sustainable resources and green technologies which will provide environmental benefits. Instruction is designed to allow for the application of science and technology to measure environmental impacts resulting from production agriculture through field and laboratory experiences.

Food Technology and Safety (One-Half to One Credit)

PEIMS: 13001300

Grade placement: 10-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in value-added and food processing systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to value-added and food processing and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings. This course examines the food technology industry as it relates to food production, handling, and safety.

Food Processing (One to Two Credits)

PEIMS: 13001400

Grade placement: 10-12

Required prerequisite: Food Technology and Safety

To be prepared for careers in food products and processing systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course focuses on the food processing industry with special emphasis on the handling, processing, and marketing of food products.

Wildlife, Fisheries, and Ecology Management (One-Half to One Credit)

PEIMS: 13001500

Grade placement: 9-12

Required prerequisite: Principles of Agriculture, Food & Natural Resources

To be prepared for careers in natural resource systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course examines the management of game and non-game wildlife species, fish, and aquacrops and their ecological needs as related to current agricultural practices.

Range Ecology and Management (One-Half to One Credit)

PEIMS: 13001600

Grade placement: 10-12

Required prerequisite: Wildlife, Fisheries and Ecology Management

To be prepared for careers in environmental and natural resource systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to environmental and natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings. This course is designed to develop students' understanding of rangeland ecosystems and sustainable forage production.

Forestry and Woodland Ecosystems (One-Half to One Credit)

PEIMS: 13001700

Grade placement: 10-12

Required prerequisite: Wildlife, Fisheries and Ecology Management

To be prepared for careers in natural resource systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. This course examines current management practices for forestry and woodlands. Special emphasis is given to management as it relates to ecological requirements and how these practices impact the environment.

Principles and Elements of Floral Design (One Credit)

PEIMS: 13001800

Grade placement: 10-12

Recommended prerequisite(s): Principles of Agriculture, Food & Natural Resources

May be used to satisfy Fine Arts credit if taught by Highly Qualified Instructor

To be prepared for careers in floral design, students need to attain academic skills and knowledge as well as technical knowledge and skills related to horticultural systems and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply and transfer their knowledge and skills and technologies in a variety of settings. This course is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Through the analysis of artistic floral styles and historical periods, students develop respect for the traditions and contributions of diverse cultures. Students respond to and analyze floral designs, thus contributing to the development of lifelong skills of making informed judgments and evaluations.

Landscape Design and Turf Grass Management (One-Half to One Credit)

PEIMS: 13001900

Grade placement: 10-12

Required prerequisite: Principles and Elements of Floral Design

To be prepared for careers in horticultural systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings. This course is designed to develop an understanding of landscape and turf grass management techniques and practices.

Horticulture Science (One-Half to One Credit)

PEIMS: 13002000

Grade placement: 10-12

Required prerequisite: Principles and Elements of Floral Design

To be prepared for careers in horticultural systems, students need to attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings. This course is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production.

Advanced Plant and Soil Science (One Credit)

PEIMS: 13002100

Grade placement: 12

Required prerequisite: Landscape Design and Turf Management **OR** Horticulture Science

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Plant and Soil Science provides a way of learning about the natural world. Students should know how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other fields of science. Investigations, laboratory practices, and field exercises will be used to develop an understanding of current plant and soil science. This course is designed to prepare students for careers in the food and fiber industry. Students will learn, reinforce, apply, and transfer their knowledge in a scientific setting.

Agricultural Mechanics and Metal Technologies (One-Half to One Credit)

PEIMS: 13002200

Grade placement: 10-12

Required prerequisite(s): Principles of Agriculture, Food & Natural Resources

To be prepared for careers in agricultural power, structural, and technical systems, students need to attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings. This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques.

Agricultural Facilities Design and Fabrication (One to Two Credits)

PEIMS: 13002300

Grade placement: 11-12

Required prerequisite: Agricultural Mechanics and Metal Technologies

To be prepared for careers in mechanized agriculture and technical systems, students attain knowledge and skills related to agricultural facilities design and fabrication. Students explore career opportunities, entry requirements, and industry expectations. To prepare for success, students reinforce, apply, and transfer their academic knowledge and technical skills in a variety of settings.

Agricultural Power Systems (One to Two Credits)

PEIMS: 13002400

Grade placement: 10-12

Required prerequisite: Agricultural Mechanics and Metal Technologies

To be prepared for careers in agricultural power, structural, and technical systems, students should attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students should have opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings. This course is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery.

Practicum in Agriculture, Food, and Natural Resources (Two to Three Credits)

PEIMS: 13002500

Grade Placement: 11-12

Required Prerequisite: a minimum of one credit from the courses in the Agriculture, Food, and Natural Resources cluster

The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources cluster. The practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories.



Principles of Architecture and Construction (One-Half to One Credit)

PEIMS: 13004200

Grade Placement: 9-12

Principles of Architecture and Construction provides an overview to the various fields of architecture, interior design, construction science, and construction technology. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, educational, and career information to set and achieve realistic career and educational goals. Job-specific, skilled training can be provided through the use of training modules to identify career goals in trade and industry areas. Safety and career opportunities are included, in addition to work ethics and job-related study in the classroom such as communications; problem solving and critical thinking; information technology applications; systems; safety, health, and environmental; leadership and teamwork; ethics and legal responsibilities; employability and career development; technical skills; introduction to hand tools; introduction to power tools; basic rigging; and reading technical drawings.

Interior Design (One-Half to One Credit)

PEIMS: 13004300

Grade Placement: 10-12

Recommended prerequisite(s): Algebra I, Principles of Architecture and Construction, OR Architectural Design

Interior Design is a technical course that addresses psychological, physiological, and sociological needs of individuals by enhancing the environments in which they live and work. Individuals use knowledge and skills related to interior and exterior environments, construction, and furnishings to make wise consumer decisions, increase productivity, and compete in industry.

Advanced Interior Design (One to Two Credits)

PEIMS: 13004400

Grade Placement: 11-12

Required prerequisite: Interior Design

Recommended prerequisite(s): Geometry, Architectural Design, OR Advanced Architectural Design.

Introduction. Advanced Interior Design is a technical laboratory course that includes the knowledge of the employability characteristics, principles, processes, technologies, communication, tools, equipment, and materials related to interior spatial design.

Practicum in Interior Design (Two to Three Credits)

PEIMS: 13004500

Grade Placement: 12

Required prerequisite: Advanced Interior Design

The practicum course is a paid or unpaid capstone experience or independent study course for students participating in a coherent sequence of career and technical education courses in the field of interior design. Instruction may be delivered through laboratory training or through career preparation delivery arrangements. This is an occupationally-specific course designed to provide classroom technical instruction. Job-specific skilled training is provided through the use of laboratory training or training plans by local training sponsors in areas compatible with identified career goals in interior design. In addition, students are expected to develop knowledge and skills described in one of the following training specializations. Housing, furnishings, and equipment construction: students whose training emphasizes housing, furnishings, and equipment production are expected to demonstrate advanced knowledge and skills in this area OR Housing, furnishings, and equipment management and services: students whose training emphasizes housing, furnishings, and equipment management and services are expected to demonstrate advanced knowledge and skills in this area.

Architectural Design (One to Two Credits)

PEIMS: 13004600

Grade Placement: 10-12

Required Prerequisite: Principles of Architecture and Construction

Recommended prerequisites: Algebra I, Geometry

In Architectural Design, students gain knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Architectural design includes the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes.

Advanced Architectural Design (Two to Three Credits)

PEIMS: 13004700

Grade Placement: 11-12

Required Prerequisite: Architectural Design or Advanced Interior Design

In Advanced Architectural Design, students gain advanced knowledge and skills specific to those needed to enter a career in architecture and construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, and landscape architecture. Advanced Architectural design includes the advanced knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for commercial or residential architectural purposes.

Practicum in Architectural Design (Two to Three Credits)

PEIMS: 13004800

Grade Placement: 12

Required prerequisite: completion of a coherent sequence in a program area related to the field of architectural design. Instruction may be delivered through laboratory training or through career preparation delivery arrangements.

Practicum in Architectural Design is an occupationally specific course designed to provide technical instruction in architectural design. Safety and career opportunities are included in addition to work ethics and architectural design study.

Construction Management (One to Two Credits)

PEIMS: 13004900

Grade Placement: 10-12

Required Prerequisite: Principles of Architecture and Construction

Recommended prerequisites: Algebra I, Geometry

In Construction Management, students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management includes the knowledge of the design techniques and tools related to the management of architectural and engineering projects.

Advanced Construction Management (Two to Three Credits)

PEIMS: 13005000

Grade Placement: 11-12

Required prerequisite: Construction Management

In Advanced Construction Management, students gain knowledge and skills specific to those needed to enter the workforce as carpenters or building maintenance supervisors or build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management includes the knowledge of the design, techniques, and tools related to the management of architectural and engineering projects.

Construction Technology (One to Two Credits)

PEIMS: 13005100

Grade Placement: 10-12

Required Certification: Principles of Architecture and Construction

In Construction Technology, students gain knowledge and skills specific to those needed to enter the work force as carpenters or building maintenance supervisors or prepare for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in safety, tool usage, building materials, codes, and framing.

Advanced Construction Technology (Two to Three Credits)

PEIMS: 13005200

Grade Placement: 11-12

Required Prerequisite: Construction Technology

In Advanced Construction Technology, students gain advanced knowledge and skills specific to those needed to enter the work force as carpenters, building maintenance technicians, or supervisors or prepare for a postsecondary degree in construction management, architecture, or engineering. Students build on the knowledge base from Construction Technology and are introduced to exterior and interior finish out skills.

Mill and Cabinetmaking Technology (Two to Three Credits)

PEIMS: 13005300

Grade Placement: 10-12

Required prerequisite: Principles of Architecture and Construction

Recommended prerequisite: Construction Technology

In Mill and Cabinetmaking Technology, students gain knowledge and skills specific to those needed to enter the work force in the area of mill work and cabinet manufacturing and installation. The student may also apply these skills to professions in carpentry or building maintenance supervision or use the skills as a foundation for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in cabinet design, tool usage, jointing methods, finishes, and numerical and computer control production methods.

Building Maintenance Technology (One to Two Credits)

PEIMS: 13005400

Grade Placement: 10-12

Required prerequisite: Principles of Architecture and Construction

Recommended prerequisite: Construction Technology

In Building Maintenance Technology, students gain knowledge and skills specific to those needed to enter the field of building maintenance as a building maintenance technician or supervisor or secure a foundation for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in plumbing, electrical, and Heating, Ventilation, and Air Conditioning (HVAC) systems. Additionally, students learn methods for repair and installation of drywall, roof, and insulation systems.

Advanced Building Maintenance Technology (Two to Three Credits)

PEIMS: 13005500

Grade Placement: 10-12

Required Prerequisite: Building Maintenance Technology

In Advanced Building Maintenance Technology, students continue to gain advanced knowledge and skills specific to those needed to enter the work force as a building maintenance technician or supervisor and construction project manager or secure a foundation for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in safety, Occupational Safety and Health Administration (OSHA) standards, safety devices in electrical circuits, maintenance of electrical and heating, ventilation, and air conditioning (HVAC) systems, and concepts of historic preservation.

Electrical Technology (One to Two Credits)

PEIMS: 13005600

Grade Placement: 10-12

Required prerequisite: Principles of Architecture and Construction

Recommended prerequisite: Construction Technology

In Electrical Technology, students gain knowledge and skills specific to those needed to enter the work force as an electrician or building maintenance supervisor or prepare for a postsecondary degree in construction. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, and the reading of electrical drawings, schematics, and specifications.

Advanced Electrical Technology (Two to Three Credits)

PEIMS: 13005700

Grade Placement: 11-12

Required Prerequisite: Electrical Technology

In Advanced Electrical Technology, students gain advanced knowledge and skills specific to those needed to enter the work force as an electrician or building maintenance technician or supervisor or prepare for a postsecondary degree in construction. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.

Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology (One to Two Credits)

PEIMS: 13005800

Grade Placement: 10-12

Required Prerequisite: Principles of Architecture and Construction OR Construction Technology

In Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology, students gain knowledge and skills specific to those needed to enter the industry as technicians in the HVAC and refrigeration industry or building maintenance technician or supervisor or prepare for a postsecondary degree. Students acquire knowledge and skills in safety, principles of HVAC theory, tools, codes, and installation of HVAC and refrigeration equipment.

Advanced Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology (Two to Three Credits)

PEIMS: 13005900

Grade Placement: 11-12

Required Prerequisite: Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology
In Advanced Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology, students gain advanced knowledge and skills specific to those needed to enter the industry as HVAC and refrigeration technicians or building maintenance technicians or supervisors or prepare for a postsecondary degree. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of commercial HVAC equipment, heat pumps, troubleshooting techniques, various duct systems, and maintenance practices.

Piping and Plumbing Technology (One to Two Credits)

PEIMS: 13006000

Grade Placement: 10-12

Required prerequisite: Principles of Architecture and Construction or Construction Technology

In Piping and Plumbing Technology, students gain knowledge and skills needed to enter industry as a plumber, pipe fitter, or building maintenance technician or supervisor or prepare for a postsecondary degree in construction management, architecture, or engineering. Students acquire knowledge and skills in tool usage, safety, pipefitting, drainage, building codes, and water supply.

Advanced Piping and Plumbing Technology (Two to Three Credits)

PEIMS: 13006100

Grade placement: 11-12

Required prerequisite: Piping and Plumbing Technology

In Advanced Piping and Plumbing Technology, students gain advanced knowledge and skills specific to those needed to enter the industry as a plumber, pipe fitter, or building maintenance technician or supervisor or prepare for a postsecondary degree in mechanical engineering. Students acquire knowledge and skills in industrial pipe fitting, motorized equipment, oxy-fuel cutting, and water, chemical, steam, compressed air, and oil pipe systems.

Practicum in Construction Management (Two to Three Credits)

PEIMS: 13006200

Grade placement: 12

Required prerequisite: Completion of a coherent sequence in a program area related to the field of Construction Management

Instruction may be delivered through laboratory training or through career preparation delivery arrangements. Practicum in Construction Management is an occupationally specific course designed to provide classroom technical instruction or on-the-job training experiences. Safety and career opportunities are included in addition to work ethics and job-related study in the classroom.



Principles of Arts, Audio/Video Technology, and Communications (One-Half to One Credit)

PEIMS: 13008200

Grade placement: 9

Careers in the Arts, Audio/Video Technology, and Communications career cluster require, in addition to creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication. Within this context, students will be expected to develop an understanding of the various and multifaceted career opportunities in this cluster and the knowledge, skills, and educational requirements for those opportunities.

Animation (One to Two Credits)

PEIMS: 13008300

Grade placement: 10-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications

Recommended prerequisites: Graphic Design and Illustration or Art I.

Careers in animation span all aspects of motion graphics. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video technology, and Communications career cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.

Advanced Animation (Two to Three Credits)

PEIMS: 13008400

Grade placement: 11-12

Required prerequisite: Animation

Careers in animation span all aspects of motion graphics. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video technology, and Communications career cluster, students will be expected to create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry.

Audio/Video Production (One to Two Credits)

PEIMS: 13008500

Grade placement: 9-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications

(Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the industry with a focus on pre-production, production, and post-production audio and video activities.

Advanced Audio/Video Production (Two to Three Credits)

PEIMS: 13008600

Grade placement: 10-12

Required prerequisite: Audio/Video Production

Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced understanding of the industry with a focus on pre-production, production, and post-production activities. This course may be implemented in an advanced audio format or an advanced format, including both audio and video.

Practicum in Audio/Video Production (Two to Three Credits)

PEIMS: 13008700

Grade placement: 11-12

Required prerequisite: Advanced Audio/Video Production or Advanced Animation

Careers in audio and video technology and film production span all aspects of the audio/video communications industry. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production audio and video activities in a studio environment. This course may be implemented in an advanced audio, video, or animation format. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Graphic Design and Illustration (One to Two Credits)

PEIMS: 13008800

Grade placement: 10-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications

Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.

Advanced Graphic Design and Illustration (Two to Three Credits)

PEIMS: 13008900

Grade placement: 10-12

Required prerequisite: Graphic Design and Illustration

Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced understanding of the industry with a focus on mastery of content knowledge and skills.

Practicum in Graphic Design and Illustration (Two to Three Credits)

PEIMS: 13009000

Grade placement: 10-12

Required prerequisite: Advanced Graphic Design and Illustration OR Advanced Commercial Photography, OR Advanced Animation

Careers in graphic design and illustration span all aspects of the advertising and visual communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Commercial Photography (One to Two Credits)

PEIMS: 13009100

Grade placement: 10-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications

Recommended prerequisite: Graphic Design and Illustration OR Art I

Careers in commercial photography require skills that span all aspects of the industry from setting up a shot to delivering products in a competitive market. Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the commercial photography industry with a focus on creating quality photographs.

Advanced Commercial Photography (Two to Three Credits)

PEIMS: 13009200

Grade placement: 11-12

Required prerequisite: Commercial Photography

Careers in commercial photography span all aspects of the industry from setting up a shot to delivering products in a competitive market. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced technical understanding of the commercial photography industry with a focus on producing, promoting, and presenting professional quality photographs.

Fashion Design (One to Two Credits)

PEIMS: 13009300

Grade placement: 10-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications
Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of fashion and the textile and apparel industries.

Advanced Fashion Design (Two to Three Credits)

PEIMS: 13009400

Grade placement: 10-12

Required prerequisite: Fashion Design

Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced understanding of fashion, with emphasis on design and production.

Practicum in Fashion Design (Two to Three Credits)

PEIMS: 13009500

Grade placement: 11-12

Required prerequisite: Advanced Fashion Design

Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced technical understanding of the business aspects of fashion, with emphasis on promotion and retailing. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Printing and Imaging Technology (One to Two Credits)

PEIMS: 13009600

Grade placement: 10-12

Required prerequisite: Principles of Arts, Audio/Video Technology, and Communications

Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the printing industry with a focus on prepress and desktop publishing.

Advanced Printing and Imaging Technology (Two to Three Credits)

PEIMS: 13009700

Grade placement: 10-12

Required prerequisite: Printing and Imaging Technology

Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced understanding of the printing industry with a focus on press operations.

Practicum in Printing and Imaging Technology (Two to Three Credits)

PEIMS: 13009800

Grade placement: 11-12

Required prerequisite: Advanced Printing and Imaging Technology

Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an advanced technical understanding of the printing industry with a focus on finishing and bindery operations and customer-based projects. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.

Professional Communications (One-Half to One Credit)

PEIMS: 13009900

Grade placement: 9-12

May be used to satisfy Speech Credit

Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.



Principles of Business, Marketing, and Finance (One-Half to One Credit)

PEIMS: 13011200

Grade placement: 9-11

In Principles of Business, Marketing, and Finance, students gain knowledge and skills in economies and private enterprise systems, the impact of global business, marketing of goods and services, advertising, and product pricing. Students analyze the sales process and financial management principles. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems and settings in business, marketing, and finance.

Business Information Management I (One to Two Credits)

PEIMS: 13011400

Grade placement: 9-12

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.

Business Information Management II (One to Two Credits)

PEIMS: 13011500

Grade placement: 11-12

Required prerequisite: Business Information Management I

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies, create complex word-processing documents, develop sophisticated spreadsheets using charts and graphs, and make an electronic presentation using appropriate multimedia software.

Business English (One Credit)

PEIMS: 13011600

Grade placement 12

Required prerequisite: Principles of Business, Marketing & Finance

Recommended prerequisite: English III

Minimum Graduation Plan: 4th ELA credit w/Highly Qualified Instructor

Recommended Graduation Plan: N/A

Distinguished Graduation Plan: N/A

Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students are expected to plan, draft, and complete written compositions on a regular basis. Students edit their papers for clarity, engaging language, and the correct use of the conventions and mechanics of written English and produce final, error-free drafts for business reproduction.

Business Law (One-Half to One Credit)

PEIMS: 13011700

Required prerequisite: Principles of Business, Marketing & Finance

Grade placement: 11-12

Students analyze the social responsibility of business and industry regarding the significant issues relating to the legal environment, business ethics, torts, contracts, negotiable financial instruments, personal property, sales, warranties, business organizations, concept of agency and employment, and real property. Students apply technical skills to address business applications of contemporary legal issues. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions.

Global Business (One-Half to One Credit)

PEIMS: 13011800

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing & Finance

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce and postsecondary education. Students apply technical skills to address global business applications of emerging technologies. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment.

Human Resources Management (One-Half to One Credit)

PEIMS: 13011900

Grade placement: 11-12

Required prerequisite: Principles of Business, Marketing & Finance

Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of human resources management, which include recruitment, selection, training, development, and compensation. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of human resources in order to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, financial, ethical, and international dimensions of business to make appropriate human resources decisions.

Virtual Business (One-Half to One Credit)

PEIMS: 13012000

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing & Finance

Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions. Students will be able to identify steps needed to locate customers, set fees, and develop client contracts. Student will be able to provide administrative, creative, and technical services using advanced technological modes of communication and data delivery. The student builds a functional website that incorporates the essentials of a virtual business.

Business Management (One to Two Credits)

PEIMS: 13012100

Grade placement: 10-12

Required prerequisite: Human Resources Management

Students recognize, evaluate, and prepare for a rapidly evolving global business environment that requires flexibility and adaptability. Students analyze the primary functions of management and leadership, which are planning, organizing, staffing, directing or leading, and controlling. Topics will incorporate social responsibility of business and industry. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent managers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate management decisions.

Practicum in Business Management (Two to Three Credits)

PEIMS: 13012200 Practicum in Business Management I

PEIMS: 13012210 Practicum in Business Management II

Grade placement 12

Required prerequisite: completion of a coherent sequence in a program area related to the field of business management. Instruction may be delivered through laboratory training or through career preparation delivery arrangements.

The Practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the nature and level of experience. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies. Students develop a foundation in the economical, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions.

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Principles of Education and Training (One-Half to One Credit)

PEIMS: 13014200

Grade placement: 9-12

Principles of Education and Training is designed to introduce learners to the various careers available within the education and training career cluster. Students use self-knowledge and educational and career information to analyze various careers within the education and training career cluster. Students will also gain an understanding of the basic knowledge and skills essential to careers within the education and training career cluster. Students will develop a graduation plan that leads to a specific career choice in the student's interest area.

Human Growth and Development (One Credit)

PEIMS: 13014300

Grade placement: 10-12

Required prerequisite: Principles of Education and Training

Human Growth and Development is an examination of human development across the lifespan with emphasis upon research, theoretical perspectives, and common physical, cognitive, emotional, and social developmental milestones. The course covers material that is generally taught in a postsecondary, one-semester introductory course in developmental psychology or human development.

Instructional Practices in Education and Training (One to Two Credits)

PEIMS: 13014400

Grade placement: 11-12

Required prerequisite: Human Growth and Development

Instructional Practices in Education and Training is a field-based internship that provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators or trainers in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, develop materials for educational environments, assist with record keeping, and complete other responsibilities of teachers, trainers, paraprofessionals, or other educational personnel.

Practicum in Education and Training (Two to Three Credits)

PEIMS: 13014500

Grade placement: 12

Required prerequisite: Instructional Practices in Education and Training

Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.

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Money Matters (One-Half to One Credit)

PEIMS: 13016200

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students will investigate global economics with emphasis on the free enterprise system and its impact on consumers and businesses. Students apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to set long-term financial goals based on those options. Students will determine methods of achieving long-term financial goals through investment, tax planning, asset allocation, risk management, retirement planning, and estate planning.

Banking and Financial Services (One-Half to One Credit)

PEIMS: 13016300

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students develop knowledge and skills in the economical, financial, technological, international, social, and ethical aspects of banking to become competent consumers, employees, and entrepreneurs. Students incorporate a broad base of knowledge that includes the operations, sales, and management of banking institutions to gain a complete understanding of how banks function within society.

Securities and Investments (One-Half to One Credit)

PEIMS: 13016400

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students will describe and abide by laws and regulations in order to manage business operations and transactions in the securities industry; access, process, maintain, evaluate, and disseminate information to assist in making decisions common to the securities industry; and monitor, plan, and control day-to-day securities organization activities to ensure continued business functioning. Students will use career planning concepts, tools, and strategies to explore, obtain, and develop a career in the securities industry. Students will determine client needs and wants and respond through planned, personalized communication to influence purchase decisions and enhance future securities sales opportunities.

Insurance Operations (One-Half to One Credit)

PEIMS: 13016500

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students will describe and abide by laws and regulations in order to manage business operations and transactions in the insurance industry; access, process, maintain, evaluate, and disseminate information to assist in making decisions common to the insurance industry; and monitor, plan, and control day-to-day insurance organization activities to ensure continued business functioning. Students will use career planning concepts, tools, and strategies to explore, obtain, and develop a career in insurance. Students will employ underwriting techniques and strategies to gather, access, and evaluate the risk posed by potential insurance clients. Students will determine client needs and wants and respond through planned, personalized communication to influence purchase decisions and enhance future insurance business opportunities.

Accounting I (One Credit)

PEIMS: 13016600

Grade placement: 10-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students investigate the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students formulate and interpret financial information for use in management decision making.

Accounting II (One Credit)

PEIMS: 13016700

Grade placement: 11-12

Required prerequisite: Accounting I

Students continue the investigation of the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students reflect on this knowledge as they engage in various managerial and cost accounting activities. Students formulate and interpret financial information for use in management decision making.

Financial Analysis (One Credit)

PEIMS: 13016800

Grade placement: 11-12

Required prerequisite: Accounting I

Students apply technical skills to develop knowledge and skills in the economical, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students develop analytical skills by actively evaluating financial results of multiple businesses, interpreting results for stakeholders, and presenting strategic recommendations for performance improvement.

Statistics and Risk Management (One Credit)

PEIMS: 13016900

Grade placement: 11-12

Required prerequisite: Accounting I

Recommended prerequisite: Algebra II

Minimum Graduation Plan: 3rd Math w/Highly Qualified Instructor

Recommended Graduation Plan: 4th Math w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Math w/Highly Qualified Instructor

Students will use a variety of graphical and numerical techniques to analyze patterns and departures from patterns to identify and manage risk that could impact an organization.

Students will use probability as a tool for anticipating and forecasting data within business models to make decisions. Students will determine the appropriateness of methods used to collect data to ensure conclusions are valid.

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Principles of Government and Public Administration (One-Half to One Credit)

PEIMS: 13018200

Grade placement: 9-12

Government and Public Administration introduces students to foundations of governmental functions and career opportunities within the United States. Students will examine governmental documents such as the United States Constitution and the Bill of Rights.

Political Science I (One to Two Credits)

PEIMS: 13018300

Grade placement: 10-12

Required prerequisite: Principles of Government and Public Administration

This course will familiarize the student with political theory through the study of governments; public policies; and political processes, systems, and behavior.

Political Science II (One to Two Credits)

PEIMS: 13018400

Grade placement: 10-12

Required prerequisite: Political Science I

This course uses a variety of methodological approaches to examine the process, systems, and political dynamics of the United States and other nations. The dynamic component of this course includes current United States and world events.

Revenue, Taxation, and Regulation (One to Two Credits)

PEIMS: 13018500

Grade placement: 10-12

Required prerequisite: Principles of Government and Public Administration

Revenue, Taxation, and Regulation is an overview of law and investigative principles and follows agency procedures to examine evidence and ensure revenue compliance. In addition, students learn to facilitate clear and positive communication with taxpayers and become familiar with data analysis systems and revenue-related financial problems. The student prepares to enforce legal compliance and regulatory standards.

Public Management and Administration (One to Two Credits)

PEIMS: 13018600

Grade placement: 10-12

Required prerequisite: Principles of Government and Public Administration

Public Management and Administration considers that governments and nonprofit administration resemble private-sector management. Students are introduced to management tools that maximize the effectiveness of administrators and affect the quality of life of citizens in the community.

Planning and Governance (One to Two Credits)

PEIMS: 13018700

Grade placement: 10-12

Required prerequisite: Principles of Government and Public Administration

Planning and Governance provides the opportunity for students to formulate plans and policies to meet social, economic, and physical needs of communities.

National Security (Two to Three Credits)

PEIMS: 13018800

Grade placement: 10-12

Required prerequisites: Public Management and Administration

National Security introduces the students to the aspects of disaster management. The course includes engaging simulation exercises related to natural disasters, man-made disasters, and terroristic events.

Foreign Service and Diplomacy (Two to Three Credits)

PEIMS: 13018900

Grade placement: 10-12

Required prerequisite: Principles of Government and Public Administration

Foreign Service and Diplomacy provides the opportunity for students to investigate the knowledge and skills necessary for careers in foreign service. The course includes law, history, media communication, and international relations associated with the diplomatic environment.

Practicum in Local, State, and Federal Government (Two to Three Credits)

PEIMS: 13019000

Grade placement: 12

Required prerequisite: The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of courses in the Government and Public Administration cluster.

Students concurrently learn advanced concepts of political science in the classroom setting. In addition, students will apply technical skills pertaining to government and public administration in a direct mentorship by individuals in professional settings such as government, public management and administration, national security, municipal planning, foreign service, revenue, taxation, and regulation.



Principles of Health Science (One-Half to One Credit)

PEIMS: 13020200

Grade placement: 9-11

The Principles of Health Science provides an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others. The health science industry is comprised of diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems that function individually and collaboratively to provide comprehensive health care. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to apply the knowledge and skills necessary to pursue a health science career through further education and employment. Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities and limitations and understand the implications of their actions.

Medical Terminology (One-Half Credit)

PEIMS: 13020300

Grade placement: 9-12

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining forms, and singular and plural forms, plus medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology. To pursue a career in health science, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should understand that quality health care depends on the ability to work well with others. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to learn the knowledge and skills necessary to pursue a health science career through further education and employment.

Health Science (One to Two Credits)

PEIMS: 13020400

Grade placement: 10-12

Required prerequisite: Principles of Health Science and Biology.

The Health Science course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will have hands-on experiences for continued knowledge and skill development. The course may be taught by different methodologies such as clinical rotation and career preparation learning.

Practicum in Health Science (Two to Three Credits)

PEIMS: 13020500 Practicum in Health Science I

PEIMS: 13020510 Practicum in Health Science II

Grade placement: 11-12

Required prerequisite: Health Science

Recommended prerequisite: Biology

The Practicum is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

Anatomy and Physiology (One Credit)

PEIMS: 13020600

Grade placement: 10-12

Recommended prerequisite: three credits of science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum)

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

In Anatomy and Physiology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

Medical Microbiology (One-Half to One Credit)

PEIMS: 13020700

Grade placement: 10-12

Recommended prerequisite: three credits of science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum)

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Medical Microbiology. Students in Medical Microbiology explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases.

Pathophysiology (One-Half to One Credit)

PEIMS: 13020800

Grade placement: 11-12

Recommended prerequisite: three credits of science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

In Pathophysiology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology.

World Health Research (One Credit)

PEIMS: 13020900

Grade placement: 11-12

Recommended prerequisites: Biology and Chemistry

This course examines major world health problems and emerging technologies as solutions to these medical concerns. The course is designed to improve students' understanding of the cultural, infrastructural, political, educational, and technological constraints and inspire ideas for appropriate technological solutions to global medical care issues.



Principles of Hospitality and Tourism (One-Half to One Credit)

PEIMS: 13022200

Grade placement: 9-11

The hospitality and tourism industry encompasses lodging; travel and tourism; recreation, amusements, attractions, and resorts; and restaurants and food beverage service. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students use knowledge and skills that meet industry standards to function effectively in various positions within this multifaceted industry. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Hotel Management (One-Half to One Credit)

PEIMS: 13022300

Grade placement: 10-12

Required prerequisite: Principles of Hospitality and Tourism

This course focuses on the knowledge and skills needed to pursue staff and management positions available in the hotel industry. This in-depth study of the lodging industry includes departments within a hotel such as front desk, food and beverage, housekeeping, maintenance, human resources, and accounting. This course will focus on, but not be limited to, professional communication, leadership, management, human resources, technology, and accounting. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Restaurant Management (One-Half to One Credit)

PEIMS: 13022400

Grade placement 10-12

Required prerequisite: Principles of Hospitality and Tourism

This course will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Travel and Tourism Management (One-Half to One Credit)

PEIMS: 13022500

Grade placement: 10-12

Required prerequisite: Principles of Hospitality and Tourism

This course incorporates management principles and procedures of the travel and tourism industry as well as destination geography, airlines, international travel, cruising, travel by rail, lodging, recreation, amusements, attractions, and resorts. Employment qualifications and opportunities are also included in this course. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Culinary Arts (One to Two Credits)

PEIMS: 13022600

Grade placement: 10-12

Required prerequisites: Restaurant Management OR Lifetime Nutrition and Wellness, OR Principles of Hospitality and Tourism

Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification, a Texas culinary specialist certification, or any other appropriate industry certification. This course may be offered as a laboratory-based or internship course. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Practicum in Culinary Arts (Two to Three Credits)

PEIMS: 13022700 Practicum in Culinary Arts I

PEIMS: 13022710 Practicum in Culinary Arts II

Grade placement: 11-12

Required prerequisites: Culinary Arts or Hotel Management

This course is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace.

Hospitality Services (One to Two Credits)

PEIMS: 13022800

Grade placement: 11-12

Required prerequisites: Hotel Management OR Travel and Tourism Management OR Restaurant Management

Hospitality Services provides students with the academic and technical preparation to pursue high-demand and high-skill careers in hospitality related industries. The knowledge and skills are acquired within a sequential, standards-based program that integrates hands-on and project-based instruction. Standards included in the Hospitality Services course are designed to prepare students for nationally recognized industry certifications, postsecondary education, and entry-level careers. In addition, Hospitality Services is designed so that performance standards meet employer expectations, enhancing the employability of students. Instruction may be delivered through laboratory training or through internships, mentoring, or job shadowing. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

Practicum in Hospitality Services (Two to Three Credits)

PEIMS: 13022900 Practicum in Hospitality Services I

PEIMS: 13022910 Practicum in Hospitality Services II

Grade placement: 11-12

Required prerequisite: Hospitality Services

A unique practicum experience provides opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Hospitality Services integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace.

Food Science (One Credit)

PEIMS: 13023000

Grade placement: 11-12

Required prerequisite: Principles of Hospitality and Tourism.

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

In Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Food Science is the study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public.



Principles of Human Services (One-Half to One Credit)

PEIMS: 13024200

Grade placement: 9-12

This laboratory course will enable students to investigate careers in the human services career cluster, including counseling and mental health, early childhood development, family and community, and personal care services. Each student is expected to complete the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers.

Dollars and Sense (One-Half to One Credit)

PEIMS: 13024300

Grade placement: 10-12

Required prerequisite: Principles of Human Services

Dollars and Sense focuses on consumer practices and responsibilities, the money management process, decision-making skills, impact of technology, and preparation for human services careers. Students are encouraged to participate in career and technical student organizations and other leadership organizations.

Interpersonal Studies (One-Half to One Credit)

PEIMS: 13024400

Grade placement: 10-12

Required prerequisite: Principles of Human Services

This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, manage multiple adult roles, and pursue careers related to counseling and mental health services.

Lifetime Nutrition and Wellness (One-Half to One Credit)

PEIMS: 13024500

Grade placement: 10-12

Recommended prerequisites: Principles of Human Services, OR Principles of Hospitality and Tourism, OR Principles of Health Science, OR Principles of Education and Training

This laboratory course allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences.

Counseling and Mental Health (One to Two Credits)

PEIMS: 13024600

Grade placement: 10-12

Required prerequisite: Principles of Human Services

Students model the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. Students are expected to apply knowledge of ethical and legal responsibilities, limitations, and the implications of their actions. Professional integrity in counseling and mental health care is dependent on acceptance of ethical and legal responsibilities.

Child Development (One-Half to One Credit)

PEIMS: 13024700

Grade placement: 10-12

Required prerequisite: Principles of Human Services

This technical laboratory course addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children.

Child Guidance (One to Two Credits)

PEIMS: 130248

Grade placement: 10-12

Required prerequisite: Child Development

This technical laboratory course addresses the knowledge and skills related to child growth and guidance equipping students to develop positive relationships with children and effective caregiver skills. Students use these skills to promote the well-being and healthy development of children, strengthen a culturally diverse society, and pursue careers related to the care, guidance, and education of children, including those with special needs.

Family and Community Services (One-Half to One Credit)

PEIMS: 13024900

Grade placement: 11-12

Required prerequisite: Principles of Human Services

This laboratory-based course is designed to involve students in realistic and meaningful community-based activities through direct service experiences. Students are provided opportunities to interact and provide services to individuals, families, and the community through community or volunteer services. Emphasis is placed on developing and enhancing organizational and leadership skills and characteristics.

Practicum in Human Services (Two to Three Credits)

PEIMS: 13025000

Grade placement: 11-12

Required prerequisite: completion of a coherent sequence in a program area related to the field of human services. Instruction may be delivered through school-based laboratory training or through work-based delivery arrangements such as cooperative education, mentoring, and job shadowing.

Practicum in Human Services provides occupationally specific training and focuses on the development of consumer services, early childhood development and services, counseling and mental health services, and family and community services careers. Content for Practicum in Human Services is designed to meet the occupational preparation needs and interests of students and should be based upon the knowledge and skills selected from two or more courses in a coherent sequence in the human services cluster as well as the essential knowledge and skills described in subsection (c) of this section for communication, critical thinking, problem solving, information technology, ethical and legal responsibilities, leadership, teamwork, and entrepreneurship.

Introduction to Cosmetology (One-Half to One Credit)

PEIMS: 13025100

Grade placement: 9-10

Students explore areas such as bacteriology, sterilization and sanitation, hair styling, manicuring, shampooing and the principles of hair cutting, hair styling, hair coloring, skin care, and facial makeup. The student researches careers in the personal care services industry. To prepare for success, students must have skills relative to this industry, as well as academic knowledge and skills. Students may begin to earn clock hours toward state licensing requirements.

Cosmetology I (Two to Three Credits)

PEIMS: 13025200

Grade placement: 10-11

Required prerequisite: Introduction to Cosmetology

Students coordinate integration of academic, career, and technical knowledge and skills in this laboratory instructional sequence course designed to provide job-specific training for employment in cosmetology careers. Instruction includes sterilization and sanitation procedures, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Analysis of career opportunities, requirements, expectations, and development of workplace skills are included.

Cosmetology II (Two to Three Credits)

PEIMS: 13025300

Grade placement: 11-12

Required prerequisite: Cosmetology I

Students review academic knowledge and skills related to cosmetology. This course is designed to provide advanced training for employment in cosmetology careers. Instruction includes advanced training in sterilization and sanitation processes, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation requirements for licensure upon passing the state examination. Students apply, combine, and justify knowledge and skills to a variety of settings and problems.

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Principles of Information Technology (One-Half to One Credit)

PEIMS: 13027200

Grade placement: 9-10

Students develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

Computer Maintenance (One to Two Credits)

PEIMS: 13027300

Grade placement: 10-12

Required prerequisite: Principles of Information Technology

Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Telecommunications and Networking (One to Two Credits)

PEIMS: 13027400

Grade placement: 10-12

Required prerequisite: Computer Maintenance

Students develop knowledge of the concepts and skills related to telecommunications and data networking technologies and practices in order to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Computer Technician (Two to Three Credits)

PEIMS: 13027500

Grade placement: 11-12

Required prerequisites: Telecommunications and Networking and Computer Maintenance

Students gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of information technology concepts and standards are essential to prepare students for success in a technology-driven society. The critical thinking, information technology experience, and product development may be conducted either in a classroom setting with an instructor, with an industry mentor, or both.

Computer Programming (One-Half to One Credit)

PEIMS: 13027600

Grade placement: 10-12

Required prerequisite: Principles of Information Technology

Students acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as it relates to computer programming. Students apply technical skills to address business applications of emerging technologies.

Advanced Computer Programming (One to Two Credits)

PEIMS: 13027700

Grade placement: 11-12

Required prerequisites: Computer Programming

Students expand their knowledge and skills in structured programming techniques and concepts by addressing more complex problems and developing comprehensive programming solutions. Students analyze the social responsibility of business and industry regarding the significant issues relating to environment, ethics, health, safety, and diversity in society and in the workplace as it relates to computer programming. Students apply technical skills to address business applications of emerging technologies.

Digital and Interactive Media (One-Half to One Credit)

PEIMS: 13027800

Grade placement: 10-12

Required prerequisite: Principles of Information Technology

Through the study of digital and interactive media and its application in information technology, students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve a problem. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

Web Technologies (One-Half to One Credit)

PEIMS: 13027900

Grade placement: 10-12

Required prerequisite: Principles of Information Technology

Through the study of web technologies and design, students learn to make informed decisions and apply the decisions to the field of information technology. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

Research in Information Technology Solutions (Two to Three Credits)

PEIMS: 13028000

Grade placement: 12

Required prerequisite: a minimum of two high school information technology courses.

Students gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of information technology concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, information technology experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid internship, or as career preparation.



Principles of Law, Public Safety, Corrections, and Security (One-Half to One Credit)

PEIMS: 13029200

Grade placement: 9-12

Principles of Law, Public Safety, Corrections, and Security introduces students to professions in law enforcement, security, corrections, and fire and emergency management services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, security, and corrections.

Law Enforcement I (One to Two Credits)

PEIMS: 13029300

Grade placement: 10-12

Required prerequisite: Principles of Law, Public Safety, Corrections, and Security.

Law Enforcement I is an overview of the history, organization, and functions of local, state, and federal law enforcement. This course includes the role of constitutional law, the United States legal system, criminal law, law enforcement terminology, and the classification and elements of crime.

Law Enforcement II (One to Two Credits)

PEIMS: 13029400

Grade placement: 11-12

Required prerequisite: Law Enforcement I

Law Enforcement II provides the knowledge and skills necessary to prepare for a career in law enforcement. This course includes the ethical and legal responsibilities, operation of police and emergency telecommunication equipment, and courtroom testimony.

Forensic Science (One Credit)

PEIMS: 13029500

Grade placement: 11-12

Required prerequisite: Law Enforcement I

Recommended prerequisite: Biology and Chemistry

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Forensic Science is a course that uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, homicide, and the psychology of criminal behavior. Students will learn terminology and investigative procedures related to crime scene, questioning, interviewing, criminal behavior characteristics, truth detection, and scientific procedures used to solve crimes. Using scientific methods, students will collect and analyze evidence through case studies and simulated crime scenes such as fingerprint analysis, ballistics, and blood spatter analysis. Students will learn the history, legal aspects, and career options for forensic science.

Court Systems and Practices (One to Two Credits)

PEIMS: 13029600

Grade placement: 10-12

Required prerequisite: Law Enforcement I

Court Systems and Practices is an overview of the federal and state court systems. The course identifies the roles of judicial officers and the trial processes from pretrial to sentencing and examines the types and rules of evidence. Emphasis is placed on constitutional laws for criminal procedures such as search and seizure, stop and frisk, and interrogation.

Correctional Services (One to Two Credits)

PEIMS: 13029700

Grade placement: 11-12

Required prerequisite: Principles of Law, Public Safety, Corrections and Security

In Correctional Services, students prepare for certification required for employment as a correctional officer. The student will learn the role and responsibilities of a correctional officer; discuss relevant rules, regulations, and laws; and discuss defensive tactics, restraint techniques, and first aid procedures as used in the correctional setting. The student will analyze rehabilitation and alternatives to institutionalization.

Security Services (One to Two Credits)

PEIMS: 13029800

Grade placement: 11-12

Required prerequisite: Principles of Law, Public Safety, Corrections and Security

Security Services provides the knowledge and skills necessary to prepare for certification in security services. The course provides an overview of security elements and types of organizations with a focus on security measures used to protect lives, property, and proprietary information.

Firefighter I (One to Two Credits)

PEIMS: 13029900

Grade placement: 10-12

Required prerequisite: Principles of Law, Public Safety, Corrections and Security

Firefighter I introduces students to firefighter safety and development. Students will analyze Texas Commission on Fire Protection rules and regulations, proper incident reporting and records, proper use of personal protections equipment, and the principles of fire safety.

Firefighter II (Two to Three Credits)

PEIMS: 13030000

Grade placement: 11-12

Required prerequisite: Firefighter I

Firefighter II is the second in a series for students studying firefighter safety and development. Students will understand Texas Commission on Fire Protection rules and regulations, proper incident reporting and records, proper use of personal protections equipment, and the principles of fire safety. Students will use procedures for use of fire extinguishers, ladder, fire hose, and water supply apparatus.

Practicum in Law, Public Safety, Corrections, and Security (Two to Three Credits)

PEIMS: 13030100 Practicum in Law, Public Safety, Corrections, and Security I

PEIMS: 13030110 Practicum in Law, Public Safety, Corrections, and Security II

Grade placement: 11-12

Required prerequisite: completion of a coherent sequence in a program area related to the field of criminal justice

The Practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.



Principles of Manufacturing (One-Half to One Credit)

PEIMS: 13032200

Grade placement: 9-12

Recommended prerequisite: Algebra I or Geometry

In Principles of Manufacturing, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of principles of manufacturing, the design of technology, the efficient production of technology, and the assessment of the effects of manufacturing production technology prepare students for success in the modern world. The study of manufacturing technology allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. In addition to general academic and technical knowledge and skills, students gain an understanding of career opportunities available in manufacturing and what employers require to gain and maintain employment in these careers.

Welding (One to Two Credits)

PEIMS: 13032300

Grade placement: 10-12

Required prerequisite: Principles of Manufacturing

Recommended prerequisite: Algebra I

Rapid advances in technology have created new career opportunities and demands in many industries. Welding provides the knowledge, skills, and technologies required for employment in metal technology systems. Students develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success.

Advanced Welding (Two to Three Credits)

PEIMS: 13032400

Grade placement: 11-12

Required prerequisite: Welding

Recommended prerequisite: Algebra I and Geometry

Advanced Welding builds on knowledge and skills developed in Welding. Students will develop advanced welding concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Precision Metal Manufacturing (One to Two Credits)

PEIMS: 13032500

Grade placement: 10-12

Required prerequisite: Principles of Manufacturing

Recommended prerequisite: Completed or concurrently enrolled in Algebra I or Geometry

Rapid advances in technology have created new career opportunities and demands in many industries. Precision Metal Manufacturing provides the knowledge, skills, and technologies required for employment in metal technology systems. This course may also address a variety of materials in addition to metal such as plastics, ceramics, and wood. Students develop knowledge of the concepts and skills related to these systems to apply them to personal and career development. This course supports integration of academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for success.

Advanced Precision Metal Manufacturing (Two to Three Credits)

PEIMS: 13032600

Grade placement: 11-12

Required prerequisite: Precision Metal Manufacturing

This course is designed to enhance the technical knowledge and skills learned in Precision Metal Manufacturing by allowing students the opportunity to explore career preparation that has resulted from the rapid advances in technology and career demands in high-skill, high-wage opportunities. Advanced Precision Metal Manufacturing provides the knowledge, skills, and technologies required for employment in a globally competitive manufacturing environment. This course may also address a variety of materials in addition to metal such as plastics, ceramics, and wood.

Flexible Manufacturing (One to Two Credits)

PEIMS: 13032700

Grade placement: 10-12

Required prerequisite: Principles of Manufacturing

Recommended prerequisite: Algebra I or Geometry

Rapid advances in technology have created new career opportunities and demands in many industries. Flexible Manufacturing provides the knowledge, skills, and technologies required for employment in metal technology systems.

Advanced Flexible Manufacturing (Two to Three Credits)

PEIMS: 13032800

Grade placement: 11-12

Required prerequisite: Flexible Manufacturing

Recommended prerequisite: Geometry, Algebra II

Advanced Flexible Manufacturing builds on knowledge and skills developed in Flexible Manufacturing. Students will develop advanced concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.

Manufacturing Engineering (Two to Three Credits)

PEIMS: 13032900

Grade placement: 11-12

Required prerequisite: Principles of Manufacturing

Recommended prerequisite: Algebra II, Computer Science I, and Physics

In Manufacturing Engineering, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of Manufacturing Engineering, the design of technology, efficient manufacturing technology, and the assessment of the effects of production technology prepare students for success in the global economy. The study of Manufacturing Engineering allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting.

Practicum in Manufacturing (Two to Three Credits)

PEIMS: 13033000

Grade placement: 12

Required prerequisite: The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the manufacturing cluster.

The practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.



Advertising and Sales Promotion (One-Half to One Credit)

PEIMS: 13034200

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

Advertising and Sales Promotion is designed as a comprehensive introduction to the principles and practices of advertising. Students will gain knowledge of techniques used in current advertising, including print, broadcast, and digital media. The course explores the social, ethical, and legal issues of advertising, historical influences, strategies, and media decision processes as well as integrated marketing communications. The course provides an overview of how communication tools can be used to reach target audiences and increase consumer knowledge.

Fashion Marketing (One-Half to One Credit)

PEIMS: 13034300

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

Fashion Marketing is designed to provide students with knowledge of the various business functions in the fashion industry. Students in Fashion Marketing will gain a working knowledge of promotion, textiles, merchandising, mathematics, selling, visual merchandising, and career opportunities.

Entrepreneurship (One-Half to One Credit)

PEIMS: 13034400

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students will gain the knowledge and skills needed to become an entrepreneur. Students will learn the principles necessary to begin and operate a business. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services. In addition, students understand the capital required, the return on investment desired, and the potential for profit.

Retailing and E-tailing (One-Half to One Credit)

PEIMS: 13034500

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

Students will have the opportunity to develop skills that involve electronic media techniques necessary for a business to compete in a global economy. Students will coordinate online and off-line marketing. Students will demonstrate critical-thinking skills using decision-making models, case studies, various technologies, and business scenarios.

Sports and Entertainment Marketing (One-Half to One Credit)

PEIMS: 13034600

Grade placement: 9-12

Required prerequisite: Principles of Business, Marketing, and Finance

This course will provide students with a thorough understanding of the marketing concepts and theories that apply to sports and sporting events and entertainment. The areas this course will cover include basic marketing, target marketing and segmentation, sponsorship, event marketing, promotions, sponsorship proposals, and implementation of sports and entertainment marketing plans. This course will also provide students an opportunity to develop promotional plans, sponsorship proposals, endorsement contracts, sports and entertainment marketing plans, and evaluation and management techniques.

Marketing Dynamics (Two to Three Credits)

PEIMS: 13034700

Grade placement: 11-12

Required prerequisite: Fashion Marketing OR Entrepreneurship OR Retailing and e-tailing OR Sports and Entertainment Marketing

Marketing is a series of dynamic activities that focus on the customer to generate a profitable exchange. Students gain knowledge and skills that help them to be proficient in one or more of the marketing functional areas associated with distribution, financing, marketing information management, pricing, product planning, promotion, purchasing, risk management, and selling skills. Students integrate skills from academic subjects, information technology, interpersonal communication, and management training to make responsible decisions. This course may include paid or unpaid career preparation experience.

Practicum in Marketing Dynamics (Two to Three Credits)

PEIMS: 13034800

Grade placement: 12

Required prerequisite: Marketing Dynamics

Through course required employment, students gain knowledge and skills that help them become proficient in one or more of the marketing functional areas. Students will illustrate appropriate management and research skills to create the marketing mix. This course covers technology, communication, and customer-service skills. The practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. The practicum course is a paid or unpaid experience for students participating in a coherent sequence of career and technical education courses in marketing education.

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Concepts of Engineering and Technology (One-Half to One Credit)

PEIMS: 13036200

Grade placement: 9-10

Concepts of Engineering and Technology provide an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will have an understanding of the various fields and will be able to make informed decisions regarding a coherent sequence of subsequent courses. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

Biotechnology (One to Two Credits)

PEIMS: 13036300

Grade placement: 9-12

Required prerequisite: Concepts of Engineering and Technology

This course provides an overview of biotechnology, bioengineering, and related fields. Topics include genetics, cell structure, proteins, nucleic acids, and the impact of immunological events in biotechnology. Students further study the increasingly important agricultural, environmental, economic, and political roles of bioenergy and biological remediation; the roles of nanoscience and nanotechnology in biotechnology medical research; and future trends in biological science and biotechnology.

Advanced Biotechnology (One Credit)

PEIMS: 13036400

Grade placement: 11-12

Required prerequisite: Biotechnology

Recommended prerequisite: Biology and Chemistry. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Students enrolled in this course will apply advanced academic knowledge and skills to the emerging fields of biotechnology such as agricultural, medical, regulatory, and forensics. Students will have the opportunity to use sophisticated laboratory equipment, perform statistical analysis, and practice quality-control techniques. Students will conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Advanced Biotechnology study a variety of topics that include structures and functions of cells, nucleic acids, proteins, and genetics.

Engineering Design and Presentation (One to Two Credits)

PEIMS: 13035600

Grade placement: 10-12

Required prerequisite: Concepts of Engineering and Technology

Students enrolled in this course will demonstrate knowledge and skills of the process of design as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.

Advanced Engineering Design and Presentation (Two to Three Credits)

PEIMS: 13036600

Grade placement: 11-12

Required prerequisite: Engineering Design and Presentation

This course will provide students the opportunity to master computer software applications in a variety of engineering and technical fields. This course further develops the process of engineering thought and application of the design process.

Engineering Mathematics (One Credit)

PEIMS: 13036700

Grade placement: 11-12

Recommended prerequisite: Algebra II

Minimum Graduation Plan: 3rd Math with/Highly Qualified Instructor

Recommended Graduation Plan: 4th Math w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Math w/Highly Qualified Instructor

Engineering Mathematics is a course where students solve and model robotic design problems. Students use a variety of mathematical methods and models to represent and analyze problems involving data acquisition, spatial applications, electrical measurement, manufacturing processes, materials engineering, mechanical drives, pneumatics, process control systems, quality control, and robotics with computer programming.

Electronics (One to Two Credits)

PEIMS: 13036800

Grade placement: 10-12

Required prerequisite: Concepts of Engineering and Technology

Students enrolled in this course will demonstrate knowledge and applications of circuits, electronic measurement, and electronic implementation. Through use of the design process, students will transfer academic skills to component designs in a project-based environment. Students will use a variety of computer hardware and software applications to complete assignments and projects. Additionally, students explore career opportunities, employer expectations, and educational needs in the electronics industry.

Advanced Electronics (Two to Three Credits)

PEIMS: 13036900

Grade placement: 11-12

Required prerequisite: Electronics

Students enrolled in this course will demonstrate knowledge and applications of advanced circuits, electrical measurement, and electrical implementation used in the electronics and computer industries. Through use of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Additionally, students explore career opportunities, employer expectations, and educational needs in the electronics industry.

Robotics and Automation (One to Two Credits)

PEIMS: 13037000

Grade placement: 11-12

Required prerequisites: Concepts of Engineering and Electronics

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

Principles of Technology (One Science Credit)

PEIMS: 13037100

Grade placement: 10-12

Required prerequisite: one unit of high school science and Algebra I. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

In Principles of Technology, students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Various systems will be described in terms of space, time, energy, and matter. Students will study a variety of topics that include laws of motion, conservation of energy, momentum, electricity, magnetism, thermodynamics, and characteristics and behavior of waves. Students will apply physics concepts and perform laboratory experimentations for at least 40% of instructional time using safe practices.

Scientific Research and Design (One Credit)

PEIMS: 13037200 Scientific Research and Design I

PEIMS: 13037210 Scientific Research and Design II

Grade placement: 11-12

Required prerequisite: one unit of high school science. To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Nature of science. Science, as defined by the National Academy of Sciences, is the "use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process." This vast body of changing and increasing knowledge is described by physical, mathematical, and conceptual models. Students should know that some questions are outside the realm of science because they deal with phenomena that are not scientifically testable.

Engineering Design and Problem Solving (One Credit)

PEIMS: 13037300

Grade placement: 11-12

Required prerequisites: Geometry, Algebra II, Chemistry and Physics

Minimum Graduation Plan: N/A

Recommended Graduation Plan: 4th Science w/Highly Qualified Instructor

Distinguished Graduation Plan: 4th Science w/Highly Qualified Instructor

Engineering design is the creative process of solving problems by identifying needs and then devising solutions. This solution may be a product, technique, structure, process, or many other things depending on the problem. Science aims to understand the natural world, while engineering seeks to shape this world to meet human needs and wants. Engineering design takes into consideration limiting factors or "design under constraint." Various engineering disciplines address a broad spectrum of design problems using specific concepts from the sciences and mathematics to derive a solution. The design process and problem solving are inherent to all engineering disciplines. Engineering Design and Problem Solving reinforces and integrates skills learned in previous mathematics and science courses. This course emphasizes solving problems, moving from well defined toward more open ended, with real-world application. Students apply critical-thinking skills to justify a solution from multiple design options. Additionally, the course promotes interest in and understanding of career opportunities in engineering. This course is intended to stimulate students' ingenuity, intellectual talents, and practical skills in devising solutions to engineering design problems. Students use the engineering design process cycle to investigate, design, plan, create, and evaluate solutions. At the same time, this course fosters awareness of the social and ethical implications of technological development.

Practicum in Science, Technology, Engineering, and Mathematics (Two to Three Credits)

PEIMS: 13037400 I

Grade placement: 12

Required prerequisite: The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the science, technology, engineering, and mathematics career cluster.

The practicum is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

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Principles of Transportation, Distribution, and Logistics (One-Half to One Credit)

PEIMS: 13039200

Grade placement: 9-12

In Principles of Transportation, Distribution, and Logistics, students gain knowledge and skills in the safe application, design, production, and assessment of products, services, and systems. This knowledge includes the history, laws and regulations, and common practices used in the logistics of warehousing and transportation systems. Students should apply knowledge and skills in the application, design, and production of technology as it relates to the transportation, distribution, and logistics industries. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings.

Energy, Power, and Transportation Systems (One-Half to One Credit)

PEIMS: 130393

Grade Placement: 9-12

Required prerequisite: Principles of Transportation, Distribution, and Logistics

The businesses and industries of the Transportation, Distribution, and Logistics cluster are rapidly expanding to provide new career opportunities. Students will need to understand the interaction between various vehicle systems, the logistics used to move goods and services to consumers, and the components of transportation infrastructure. Performance requirements will include academic and technical skills. Students prepared to meet the expectations of employers in this industry must be able to interact and relate to others and understand the technologies used in order to provide products and services in a timely manner. The increasing demand for employees will provide growth potential.

Aircraft Technology (One to Two Credits)

PEIMS: 13039400

Grade placement: 10-12

Required prerequisite: Energy, Power, and Transportation Systems

This course is designed to teach the theory of operation of aircraft airframes, power plants, and avionics systems and associated maintenance and repair practices. Aircraft services include knowledge of the function, diagnosis, and service of the electrical, electronic, hydraulic, pneumatic, airframe, mechanical, and power plant components of aircraft.

Advanced Aircraft Technology (Two to Three Credits)

PEIMS: 13039500

Grade placement: 11-12

Required prerequisite: Aircraft Technology

This course is designed to apply the theory of operation, repair, and maintenance of aircraft airframe, power plant, and avionics systems. Aircraft services include knowledge of the function, diagnosis, and service of the electrical, electronic, hydraulic, pneumatic, airframe, mechanical, and power plant components of aircraft as governed by federal aviation regulations.

Automotive Technology (One to Two Credits)

PEIMS: 13039600

Grade placement: 10-12

Required prerequisite: Energy, Power, and Transportation Systems

Automotive services include knowledge of the function of the major automotive systems and the principles of diagnosing and servicing these systems. In Automotive Technology, students gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach the theory of operation of automotive vehicle systems and associated repair practices.

Advanced Automotive Technology (Two to Three Credits)

PEIMS: 13039700

Grade placement: 11-12

Required prerequisite: Automotive Technology

Automotive services include advanced knowledge of the function of the major automotive systems and the principles of diagnosing and servicing these systems. In Advanced Automotive Technology, students gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach the theory of operation of automotive vehicle systems and associated repair practices.

Collision Repair and Refinishing (One to Two Credits)

PEIMS: 13039800

Grade placement: 10-12

Required prerequisite: Energy, Power, and Transportation Systems

Collision repair and refinishing services include knowledge of the processes, technologies, and materials used in the reconstruction and alteration of vehicles. This course is designed to teach the concepts and theory of systems related to automotive collision repair and refinishing.

Advanced Collision Repair and Refinishing (Two to Three Credits)

PEIMS: 13039900

Grade placement: 10-12

Required prerequisite: Collision Repair and Refinishing

Collision repair and refinishing services include advanced knowledge of the processes, technologies, and materials used in the reconstruction and alteration of vehicles. This course is designed to teach the application of advanced technical skills and practices related to collision repair and refinishing.

Small Engine Technology (One to Two Credits)

PEIMS: 13040000

Grade placement: 10-12

Required prerequisite: Energy, Power, and Transportation Systems

This course is designed to provide training for entry-level employment in the small engine technology industry. Engine Technology includes knowledge of the function, diagnosis, and service of the systems and components of all types of small engines such as lawn mowers, motorcycle, and irrigation engines. Instruction includes the repair and service of cooling, air, fuel, lubricating, electrical, ignition, and mechanical systems and small engine overhauls. In addition, students will receive instruction in safety, academic, and leadership skills as well as career opportunities.

Advanced Small Engine Technology (Two to Three Credits)

PEIMS: 13040100

Grade placement: 11-12

Required prerequisite: Small Engine Technology

Advanced Small Engine Technology includes advanced knowledge of the function, diagnosis, and service of the systems and components of all types of small engines such as lawn mowers, motorcycles, and irrigation engines. This course is designed to provide advanced training for employment in the small engine technology industry. Instruction includes the repair and service of cooling, air, fuel, lubricating, electrical, ignition, and mechanical systems and small engine overhauls. In addition, the student will receive instruction in safety, academic, and leadership skills as well as career opportunities.

Transportation Systems Management (One to Two Credits)

PEIMS: 13040200

Grade placement: 9-12

Required prerequisite: Advanced Small Engine Technology

In Transportation Systems Management, students gain knowledge and skills in material handling and distribution and proper application, design, and production of technology as it relates to the transportation, distribution, and logistics industries. This course includes the safe operation of tractor-trailers, forklifts, and related heavy equipment. The course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings.

Logistics, Planning, and Management Systems (One to Two Credits)

PEIMS: 13040300

Grade placement: 10-12

This course is designed to provide training for entry-level employment in the Logistics, Planning, and Management Systems. This course focuses on the business planning and management aspects of transportation, distribution, and logistics. To prepare for success, students will learn, reinforce, experience, apply, and transfer their knowledge and skills and technologies in a variety of settings.

Practicum in Transportation, Distribution, and Logistics (Two to Three Credits)

PEIMS: 13040400

Grade placement: 11-12

Required prerequisite: The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of courses in the Transportation, Distribution, and Logistics cluster.

The Practicum is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience such as internships, mentorships, independent study, or laboratories.