Kansas Board of Regents
Precollege Curriculum Courses Approved for University Admissions

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The precollege curriculum is designed to prepare high school students for university-level work. The list of courses fulfilling the precollege curriculum has been recommended by the Kansas State Department of Education and approved by the chief executive officer of the board of regents or the chief executive officer's designee. Requirements for the precollege curriculum are found in K.A.R. 88-29-11 and 88-29a-11.

Elective Course Title	Course Code	Course Description
Exploration of Hospitality Careers	16001	Exploration of Hospitality Careers courses survey a wide array of topics while exposing students to the variety of career opportunities in hospitality fields (such as food service, lodging, tourism, and recreation). These courses serve to introduce students to the general field of hospitality, providing an opportunity to identify a focus for continued study.
Exploration of Restaurant, Food and Beverage Services	16051	Exploration of Restaurant, Food, and Beverage Services courses provide students with an overview of the restaurant, food, and beverage service industry. Topics covered include industry terminology, the history of restaurant, food, and beverage services, introduction to marketing, and the various careers available in the industry.
Restaurant, Food and Beverage Services—Comprehensive	16052	Restaurant, Food, and Beverage Services—Comprehensive courses provide students with knowledge and skills related to commercial and institutional food service establishments. Course topics range widely, but usually include sanitation and safety procedures, nutrition and dietary guidelines, food preparation (and quantity food production), and meal planning and presentation. Restaurant, Food, and Beverage Service courses may include both “back-of-the-house” and “front-of-the-house” experiences, and may therefore also cover reservation systems, customer service, and restaurant/business management.
Food Service	16053	Food Service courses provide students with instruction regarding nutrition, principles of healthy eating, and the preparation of food. Among the topics covered are large-scale meal preparation, preserving nutrients throughout the food preparation process, use and care of commercial cooking equipment, food storage, advances in food technology, safety, sanitation, management, production, service skills, menu planning, the operation of institutional food establishments and the careers available in the food service industry.
Nutrition and Food Preparation	16054	Nutrition and Food Preparation courses provide students with knowledge and skills about commercial food preparation and/or production, with a strong emphasis on nutrition, balanced diets, and satisfying special dietary needs. Topics typically include assessing nutrient content, the science of food and nutrition, physiology and utilization of nutrients. Course content may also cover additives, contaminants, food- borne illnesses, and food technology.

Restaurant Management and Operations	16055	Restaurant Management and Operations courses provide students with knowledge and skills related to commercial and institutional food service establishments, with an emphasis on management. Course topics therefore include guest service and relationships, planning, resource management, and other topics related to managing and operating restaurants.
Culinary Art Specialty	16056	Culinary Art Specialty courses provide instruction in a particular type of cooking or culinary style. Examples of such specialty fields include baking, creating and decorating wedding cakes, Middle Eastern cuisine, and so on. These courses emphasize skills specific to the type of culinary art being studied.
Particular Topics in Restaurant, Food and Beverage Services	16057	These courses examine specific topics related to Restaurant, Food, and Beverage Services, such as catering, rather than provide a general study of the industry or of specific topics already described.
Restaurant, Food and Beverage Services—Independent Study	16097	Restaurant, Food, and Beverage Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the restaurant, food, and beverage services industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Exploration of Lodging Careers	16101	Exploration of Lodging Careers courses provide an overview of the lodging industry. Topics covered include lodging terminology, the history of lodging, introduction to marketing, and the various careers available in the lodging industry.
Lodging—Comprehensive	16102	Lodging—Comprehensive courses introduce students to the lodging industry and refine their related knowledge and skills. Topics covered typically include property management, guest psychology and relationships, lodging operations, food and beverage services, and other topics related to support services within the lodging industry.
Institutional Maintenance	16103	Institutional Maintenance courses present the knowledge and skills required for service work within institutions. Topics covered typically include housekeeping and laundry services, care and cleaning of facilities, and safety and sanitation procedures, in addition to career opportunities, business responsibilities, and other types of ongoing maintenance.
Particular Topics in Lodging	16104	These courses examine specific topics in lodging such as convention planning or hotel management rather than provide a general study of the industry or of specific topics already described.
Lodging—Independent Study	16147	Lodging—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the lodging industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

Introduction to Travel and Tourism	16151	Introduction to Travel and Tourism courses provide an overview of the travel and tourism industry. Topics covered in this course may include travel and tourism terminology, the history of travel, introduction to marketing, and the various careers available in travel and tourism.
Travel and Tourism—Comprehensive	16152	Travel and Tourism—Comprehensive courses provide the knowledge and skills necessary to work in the travel industry such as sales techniques, marketing principles, and entrepreneurial skills. Additional skills learned in these courses typically include travel agency procedures, airline reservation systems, public relations, hotel/motel registration systems and services, and conference and convention planning.
World Travel and Tourism	16153	World Travel and Tourism courses provide the knowledge and skills necessary to work in the travel industry, with a focus on travel outside of the United States. Topics covered may include geography of the continents; customs, cultures, and tourist destinations in other countries; special documentation needed for international travel; and planning events to client specifications.
Eco-tourism	16154	Eco-tourism courses provide the knowledge and skills necessary to work in the travel industry, with particular attention paid to conservation and environmental issues surrounding travel and tourism. Topics covered may include recreational opportunities related to on- and off-site attractions and environmental and ecological principles.
Particular Topics in Travel and Tourism	16155	These courses examine specific topics in travel and tourism such as the airline reservation and ticketing system rather than provide a general study of the industry or of specific topics already described.
Travel and Tourism—Independent Study	16197	Travel and Tourism—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the travel and tourism industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Exploration of Recreation, Amusement and Attractions	16201	Exploration of Recreation, Amusement, and Attractions courses provide an overview of the recreation industry. Topics covered in this course may include industry terminology; the history of recreation, amusement, and attractions; introduction to marketing; and the various careers available in the industry.

Recreation, Amusement and Attractions—Comprehensive	16202	Recreation, Amusement, and Attractions—Comprehensive courses provide students with the attitudes, skills, and knowledge needed for employment in theme parks, attractions and outdoor recreation facilities, exhibitions, and event planning. Topics covered may include planning trade shows, fairs, and conferences; outdoor recreation and management; financial transactions; salesmanship; guest services and satisfaction; culture and customs; computer and industry technology; eco-tourism; client information; and planning specialized events while incorporating themes, timelines, budgets, target audiences, agendas, and public relations.
Particular Topics in Recreation, Amusement and Attractions	16203	These courses examine specific topics in recreation, amusement, and attractions such as local opportunities rather than provide a general study of the industry.
Recreation, Amusement, and Attractions Management	16204	Recreation, Amusement, and Attractions Management courses teach students about the development and management of recreational areas and parks and cover the economic and environmental impact of tourism. These courses may also emphasize career skills relative to the outdoor parks, recreation, and tourism industries.
Recreation, Amusement and Attractions—Independent Study	16247	Recreation, Amusement, and Attractions—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the recreation, amusement, and attractions industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Hospitality and Tourism—Independent Study	16997	Hospitality and Tourism—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest within the hospitality and tourism industry. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Construction Careers Exploration	17001	Construction Careers Exploration courses expose students to the opportunities available in the architecture and construction industry, including occupations such as carpenter, electrician, plumber, heating/air conditioning technician, safety supervisor, architect, engineer, and other occupations. Students learn about the processes involved in construction projects and may engage in a variety of small projects. These courses emphasize responsibilities, qualifications, work environment, rewards, and career paths within construction-related fields.

Construction—Comprehensive	17002	Construction—Comprehensive courses provide students with basic knowledge and skills required for construction of commercial, residential, and institutional structures. These courses provide experiences and information (typically including career opportunities and training requirements) regarding construction-related occupations such as carpentry, cabinetmaking, bricklaying, electrical trades, plumbing, concrete masonry, and so on. Students engage in activities such as reading blueprints, preparing building sites, starting foundations, erecting structures, installing utilities, finishing surfaces, and providing maintenance.
Carpentry	17003	Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills.
Framing Carpentry	17004	Framing Carpentry courses provide students with much of the same knowledge as general carpentry courses (knowledge of various types and grades of woods, proper and safe use of hand and power tools, and site selection and preparation), but place a special emphasis on construction methods applicable to floor, wall, roof, and/or stair framing. Course content may also include insulation installation and painting.
Particular Topics in Carpentry	17005	These courses cover specific aspects of building construction or carpentry. All coursework focuses upon a particular skill or set of skills related to one subtopic, such as floor framing, wall and partition framing, interior finishing, or exterior finishing.
Woodworking	17006	Woodworking courses introduce students to the various kinds of woods used in industry and offer experience in using selected woodworking tools. Students design and construct one or more projects and may prepare a bill of materials. Correct and safe use of tools and equipment is emphasized. As students advance, they focus on learning the terminology necessary to use power tools successfully, developing skills to safely use these tools in the workshop and becoming familiar with various kinds of wood-finishing materials. Advanced students typically design a project, prepare bills of materials, construct, and finish proposed projects.

Cabinetmaking	17007	Cabinetmaking courses provide students with experience in constructing cases, cabinets, counters, and other interior woodwork. Students learn to distinguish between various types of furniture construction and their appropriate applications, and how to use various woodworking machines and power tools for cutting and shaping wood. Cabinetmaking courses cover the different methods of joining pieces of wood, how to use mechanical fasteners, and how to attach hardware. Initial topics may resemble those taught in Woodworking courses; more advanced topics may include how to install plastic laminates on surfaces and how to apply spray finishes.
Masonry	17008	Masonry courses enable students to learn to construct interior and exterior walls, columns, doorways, window openings, fireplaces, chimneys, and foundations from brick and concrete block. Along with other activities, students may mix and spread cement and mortar, read blueprints and plans, and estimate materials needed for a project. Other topics may also include how to layout buildings on footings and how to establish grades using a surveying transit.
Building Maintenance	17009	Formerly known as Building Maintenance, Building Repair and Maintenance courses train students to maintain commercial, industrial, and residential buildings and homes. Instruction is provided in the basic maintenance and repair of air conditioning, heating, plumbing, electrical, and other mechanical systems. Topics covered may include identifying and using hand and power tools safely; installing and repairing floor coverings, walls, and ceilings; installing and repairing doors, windows, screens, and cabinets; applying finishes to prepared surfaces; and repairing roofs, masonry, plumbing, and electrical systems.
Home Maintenance	17010	Home Maintenance courses provide students with knowledge and skills related to devices and systems found in the home. Course content may include electrical wiring, plumbing, window and door repair and installation, wall and floor repair and finishing, furniture repair and finishing, and small appliance repair.
Wall Finishings	17011	Wall Finishings courses prepare students to finish exterior or interior surfaces by applying protective coating materials such as paint, lacquer, wallpaper, plaster, or stucco. Course topics may include instruction in making, mixing, and matching paint colors; applying coating with various types of equipment; applying wallpaper; lathing, preparing surfaces, smoothing, and finishing.
Upholstering	17012	Upholstering courses prepare students in all aspects of upholstering furniture. Topics covered may include installing, repairing, arranging, and securing the springs, filler, padding and cover materials of chairs, couches and mattresses; cutting, sewing and trimming; cushion filling, tufting, and buttoning; and wood refinishing.

Commercial Construction	17013	Commercial Construction courses focus on residential construction principles and their relationship to commercial applications. Topics typically covered include commercial concrete forming, reinforcement and placement methods, stair construction, metal framing, interior finishes, suspended ceiling systems, metal framing and drywall applications, and commercial roofing methods and systems. These courses may also address equipment and tool usage in commercial construction.
Concrete Foundations	17014	Concrete Foundations courses cover concrete and its relationship to construction and concrete safety and testing techniques.
Construction Estimating	17015	Construction Estimating courses provide students with the opportunity to learn the fundamental principles of construction estimating. Course topics typically include procedures for estimating costs in different divisions of a project and determining the critical quantities of materials obtained from a set of plans.
Construction Management	17016	Construction Management courses introduce students to the concept of the project team, use of documents on a construction site, submittals, shop drawings, jobsite layout, meeting control, safety management, changes and claims forms, documents, and project closeout record keeping. Topics may also include construction law, construction contracts, and how to work with owners and subcontractors.
Particular Topics in Construction	17017	These courses provide students with specialized knowledge and help them develop skills in particular topics concerning the processes, responsibilities, and occupations of the construction industry.
General Construction—Independent Study	17047	General Construction—Independent Study courses, often conducted with instructors as mentors, enable students to explore construction-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Air Conditioning	17051	Air Conditioning courses offer students specialized training related to the design, installation, and repair of air conditioning systems for residential and commercial use. These courses may emphasize the theory and design of electrical, electronic, mechanical, and pneumatic control systems used in air conditioning systems. They might also (or instead) focus on procedures used in troubleshooting, servicing, and installing electric, gas, and ground source components of air conditioning systems.
Refrigeration	17052	Refrigeration courses provide students with exposure to and training in the theories, equipment, and skills needed to design, install, and repair commercial and residential refrigeration systems. Course topics typically include the theory of thermodynamics, measurement of pressures and temperatures, components and common accessories of refrigeration systems, and repair and safety procedures.

Heating	17053	Heating courses offer students training specific to the design, installation, and repair of heating systems for residential use. Topics typically include electric, gas, steam, and ground-source systems; ventilation procedures; safety practices; and installation and trouble-shooting techniques.
Air Conditioning/Refrigeration	17054	Air Conditioning/Refrigeration courses enable students to develop the combined skills and knowledge to install, maintain, adjust, and repair both air conditioning and refrigeration systems.
Air Conditioning, Heating, and Refrigeration	17055	In Air Conditioning, Heating, and Refrigeration courses, students learn the basic principles of these systems, along with how to identify and safely use tools/equipment used in the trade.
Heating, Ventilation, and Air Conditioning	17056	These courses synthesize basic and advanced principles in heating, ventilation, and air conditioning and include topics such as air filtration methods, humidity control, and the installation and maintenance of heat pumps, furnaces, and air conditioners. Students also learn about climate control systems; electrical wiring; systems design; sizing, fabricating, and installing ductwork; installing and maintaining climate control systems; and safety.
Particular Topics in HVACR	17057	These courses offer students specialized training in aspects or topics that are common to various climate control systems (heating, ventilation, air conditioning, and refrigeration systems); such topics may include electrical components, diagrams and blueprints, welding and soldering techniques, and so on.
Plumbing	17058	Plumbing courses provide students with instruction in installing waste and vent systems, water and gas pipes, trim, and fixtures. Skills taught include cutting and joining various types of pipe (for instance, steel, plastic) using various methods (cement, seat method, and so on).
Plumbing and Heating	17059	Plumbing and Heating courses address the installation, assembly, maintenance, and repair of piping, plumbing, heating equipment, and water and drainage systems. Topics covered include the computation of heat losses and BTU requirements and blueprint reading. Students gain experience with electric, gas, and oil furnaces; vacuum pumps; air compressors; and mechanical and pneumatic testing equipment.
HVAC & Plumbing Systems	17060	Course designed to teach basic skills required for installation of HVAC and plumbing systems.
Pipefitting Technology	17061	Course design to teach exposure to and training in the theories, equipment and skills needed to perform pipefitting techniques.
Skilled Mechanical Crafts	17062	A course to introduce students to the basic skills necessary for occupations in skilled mechanical crafts (plumbing, HVAC, pipefitting, sheet metal, refrigeration).

Air Conditioning, Heating and Plumbing—Independent Study	17097	Air Conditioning, Heating, and Plumbing—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to air conditioning, heating and plumbing. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Exploration of Electricity/Electronics	17101	Exploration of Electricity/Electronics courses offer instruction in the theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity and electronics. Topics include (but are not limited to) Ohm's law, electrical equipment, wire systems, and so on; career exploration is often (but not always) an integral part of these courses.
Electricity—Comprehensive	17102	Electricity—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. These courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students progress, their projects become more complex and expansive. In these courses, safety is stressed, and a career exploration component may be offered.
Residential Wiring	17103	Covering many of the same topics as Electricity—Comprehensive courses, Residential Wiring courses apply the knowledge and skills that students acquire to the electrical systems found in family dwellings. Because these courses emphasize residential electricity, topics may also include cable installation, telephone systems, and the installation of lighting fixtures, outlets, and so on. Maintenance and repair skills are often included as course topics.
Industrial Electricity	17104	Covering many of the same topics as Electricity—Comprehensive courses, Industrial Electricity courses apply the knowledge and skills that students acquire to the electrical systems used in industry. Because of this emphasis, these courses may also cover the installation of transformers and control devices, emergency generator systems, and other industrial applications.
Particular Topics in Electricity	17105	These courses provide students with specialized knowledge and help them develop skills in particular topics concerning the nature, behavior, and application of electrical current.

Electronics—Comprehensive	17106	Electronics—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electronic field as well as typically cover the theory of electricity. Course topics may include AC, DC, analog, and integrated circuitry and solid state and digital devices, amplifiers, and semiconductors. Skills covered may involve the repair, maintenance, and building of electronic equipment such as radios, television sets, and industrial equipment.
Particular Topics in Electronics	17107	Individual courses in this category offer specialized training in topics related to electronics such as diodes, transistors, digital techniques, solid-state devices, analog circuits, and microprocessors.
Electricity/Electronics—General	17108	Electricity/Electronics—General courses teach fundamental concepts of electricity and electronics, including safety procedures, and may introduce students to the available occupations in electrical and electronic industries. Topics covered typically include components of circuits; reading schematics and diagrams; electricity and electronics as sources of energy; signal transmission; and using equipment common to these occupations, such as ammeters, voltmeters, capacitor checkers, transistor testers, signal generators, and ohmmeters.
Particular Topics in Electricity/Electronics	17109	These courses provide instruction in the theory and skills needed in fields involving electricity and electronics and related fields that focus on electrical wiring or electronic signals.
Analog and Digital Circuits	17110	In these courses, analog and digital circuits and systems are compared. Topics covered include binary and continuously variable currents and signals (typically in the context of voltage), waveforms, signal loss and distortion, modulation, and signal processing. These courses may also introduce other media, such as sound waves and liquids.
Analog Circuits	17111	Analog Circuit courses emphasize currents and voltages that have continuously variable signals and, due to that emphasis, concentrate on signal modulation, transmission and reception, signal loss and distortion, and waveforms. These courses may also address conversion techniques.
Digital Circuits	17112	Digital Circuit courses emphasize currents and voltages that have binary states and, due to that emphasis, concentrate on transmission and reception of binary data, signal loss, and processing circuitry. These courses may also address conversion techniques.
Electrical & Security Systems	17113	Course design to teach basic skills required for installation of electrical and security systems.

Electricity/Electronics—Independent Study	17147	Electricity/Electronics—Independent Study courses, often conducted with instructors as mentors, enable students to explore electricity- or electronics-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Architecture and Construction—Independent study	17997	Architecture and Construction—Independent Study courses, often conducted with instructors as mentors, enable students to explore architecture and construction-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Introduction to Agriculture and Natural Resources	18001	Introduction to Agriculture and Natural Resources courses survey a wide array of topics within the agricultural industry, exposing students to the many and varied types of agriculture and career opportunities and those in related fields. These courses serve to introduce students to the agricultural field, providing them an opportunity to identify an area for continued study or to determine that their interest lies elsewhere. These courses often focus on developing communication skills, scientific research, types of business ownership, business principles, and leadership skills.
Agriculture—Comprehensive	18002	Agriculture—Comprehensive courses cover a wide range of agricultural topics, including plant and animal science, production, and processing; agricultural mechanics; food production for global populations; construction and repair of farm structures; business operations and management; and the careers available in the agricultural industry. These courses may also include topics such as chemical and soil science, ecology, agricultural marketing, and veterinary science.
Agriculture and Natural Resources—Comprehensive	18003	Agriculture and Natural Resources—Comprehensive courses may cover a wide range of topics concerning agriculture and natural resources, including plant and animal science, production, and processing; environmental science and conservation; ecology; agricultural mechanics; agricultural construction; food production for a growing global population, business operations and management; and the careers available in the agricultural/natural resources industry. These courses may also include topics such as chemical and soil science, forestry, agricultural marketing, and veterinary science.
Biological Applications in Agriculture	18004	Biological Applications in Agriculture courses are designed to integrate topics in science and agriculture. In these courses, students explore the world of agriculture and the associated biological principles. Competencies emphasize and reinforce standards for biology with agricultural applications.
Particular Topics in Environmental Service Systems	18005	These courses provide students with specialized knowledge and help them develop skills in particular topics concerning the structure, processes, and implementation of environmental service systems.

Plant Systems/Science	18051	Formerly Plant Production/Science, Plant Systems/Science courses provide knowledge about the propagation of plants for food and fiber. These courses may cover such topics as soil science, irrigation, pest and weed control, food and fiber processing, and farm operations. These courses may also cover the knowledge and skills needed to produce all types of crops or may emphasize a particular area of the agricultural industry.
Horticultural Science	18052	Formerly known as General Horticulture, Horticultural Science courses expose students to the art and science of growing plants, shrubs, trees, flowers, fruits, and vegetables. In doing so, they cover a wide variety of topics, including principles of plant science, greenhouse and nursery operations, soils and growing media mixtures, fruit and vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed and pest control, and floral design.
Ornamental Horticulture	18053	Ornamental Horticulture courses provide information regarding the care and propagation of plants, flowers, trees, and shrubs, but place a special emphasis on those plants that are used for decorative and aesthetic purposes. Because of this particular emphasis, Ornamental Horticulture courses usually concentrate on nurseries and greenhouses and on the floristry industry.
Turf and Landscape Management	18054	Turf and Landscape Management courses provide instruction that incorporates plant science, soil and growing media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge and skill to the design, establishment, and maintenance of lawns, parks, open space, golf courses and other sports facilities, and similar environments.
Particular Topics in Plant Systems	18056	These courses examine specific topics related to Plant Systems, such as floral design, hydroponics, or landscaping, rather than provide a general study of plant systems or horticulture.
Floriculture and Greenhouse Management	18057	Plant Identification and floral design are necessary knowledge skills along with the selection of greenhouse plants and management of greenhouses for production of plants and flowers in the industry.
Plant and Soil Science	18058	Courses expose students to the art and science of growing plants, shrubs, trees, flowers, fruits, agricultural crops and vegetables. In doing so, they cover a wide variety of topics, including greenhouse and nursery operations, soils and media mixtures, soil chemistry, fertility, mineralogy, hydrology, soil conservation, irrigation, fruit and vegetable production, turf/golf course management, interior and exterior plantscaping, irrigation systems, weed and pest control, and floral design.

Landscape Science I	18059	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge & skill to the design, establishment, and maintenance of lawns, parks, open space & similar environments. This course would include opportunities to design public and private spaces.
Principlies of Agriscience/Plant Science	18060	Provides an overview of the plant industry, careers and the anatomical, taxonomy, physiological structures of plants. Photosynthesis, respiration and transpiration of plants and the interdependence of plants and their growth. Soilless systems, Reproduction, plant diseases and marketing of plant products.
Landscape Science II	18061	Student may develop career opportunities through internships with local Horticulture Businesses. Advanced knowledge and skills will be developed in plant genetics. Biotechnology through science based research projects, advanced based designs utilizing tropical, specialty and non-native plants.
Turf and Landscape	18062	Course provides instruction in plant identification and landscape design. The principles of turf selection, maintenance and design of irrigations systems for public and private systems. Turf diseases. Insects and fertilizer usage are covered in this course.
Floriculture	18063	Prepares students for the floral design business with a basic floral ID and arrangements used in the floral industry for special occasions.
Floriculture and Landscape Design	18064	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification in the florist industry and landscape design. These courses emphasize applying such knowledge & skill to the design, floral arrangements for various occasions and design public and private facilities internal and external areas.
Landscape Design	18065	Course that prepares students to maintain indoor and outdoor environments. Includes instruction in plant science, climate, irrigation, nutrition, irrigation, and turf management.
Floral Design	18066	Course that prepare students for the flower catering services with instruction in purchasing, storage, delivery, floral design and arranging for various occasions.
Nursey and Landscape Design	18067	Courses provide instruction that incorporates plant science, soil and media mixtures, plant identification and optimal environments, and landscape design. These courses emphasize applying such knowledge & skill to the design, establishment, and maintenance of lawns, parks, open space & similar environments
Greenhouse Production and Management	18068	Students will have the opportunity to produce, market different types of greenhouse plants grown in the schools greenhouse. Skills in management, plant identification, pests control, starting plants, watering, fertilizing, and salesmanship will be developed.

Floral Design II	18069	Allows student to develop plans for selection of various flowers, greens and arrangement for floral occasions followed up by marketing and cost plans.
Plant Systems—Independent Study	18097	Courses in Plant Systems—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to plant systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Small Animal Care	18102	Small Animal Care courses focus on the care and management of small animals. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, use of qualitative and quantitative analyses for decisionmaking, facilities, handling and training, and grooming are typical areas of study.
Large Animal Care	18103	Large Animal Care courses focus on the care and management of large animals. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, use of qualitative and quantitative analyses for decisionmaking, facilities, handling and training, and grooming are typical areas of study. Course topics may include product processing and marketing.
Equine Science	18104	Equine Science courses focus on the care and management of horses. Animal nutrition, health, behavior, reproduction and breeding, anatomy and physiology, use of qualitative and quantitative analyses for decisionmaking, facilities, handling and training, and grooming are typical areas of study.
Veterinary Science	18105	Veterinary Science courses impart information about the causes, diagnosis, and treatment of diseases and injuries of animals, typically emphasizing domestic companion and farm animals. Course topics focus on anatomy and physiology, nutrition, behavior and training, disease prevention, reproduction, ethics of animal care, grooming, feeding, maintaining equipment and facilities, and other areas of study as appropriate.
Particular Topics in Animal Systems	18106	These courses examine specific topics related to animal care and management, production, or processing, such as equine training or animal waste management, rather than provide a general study of animal care and the systems related to their growth and management.
Animal Nutrition	18107	Animal Nutrition courses provide students with opportunities to study the structure and function of organic and inorganic nutrients. Topics may include the essential nutritive requirements of domestic livestock, poultry, and companion animals; digestion, absorption, metabolism, and barriers for nutrient utilization; sources of nutrients; application of energy systems and concepts; and regulation of feed intake in animals. These courses also teach students how to compare and contrast the nutritional levels for animal maintenance and production.

Animal Genetics	18108	Animal Genetics courses explore genetic inheritance in agricultural animals and the identification of livestock breeds by the origin, significance, distribution, and domestication of animal species. These courses allow students to compare and contrast the hierarchical classification of the major agricultural animal species and identify breeding system options based on the principles of genetics. These courses also address selecting animals based on quantitative breeding values for specific characteristics.
Integrated Pest Management	18109	Integrated Pest Management courses help students develop an understanding of the life cycles of and damage caused by pests, diseases, and weeds. Course topics may include the application of pesticides and/or herbicides to manage pest populations and assessing the effectiveness of pest management plans.
Animal Systems—Independent Study	18147	Courses in Animal Systems—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to animal systems. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agribusiness Management	18201	Agribusiness Management courses provide students with the information and skills necessary for success in agribusiness and in operating entrepreneurial ventures in the agricultural industry. These courses may cover topics such as economic principles, budgeting, risk management, finance, business law, marketing and promotion strategies, insurance, and resource management. Other possible topics include developing a business plan, employee/employer relations, problem-solving and decisionmaking, commodities, and building leadership skills. These courses may also incorporate a survey of the careers within the agricultural industry.
Agricultural Entrepreneurship	18202	Agricultural Entrepreneurship courses focus on the personal skills necessary for success in entrepreneurial ventures in the agricultural industry. Topics include setting goals, assessing and solving problems, evaluating financial progress and success, business planning, information management and evaluation, and recordkeeping.
Agricultural Leadership	18203	Agricultural Leadership courses help students develop leadership skills with a focus on opportunities in the food, fiber, and natural resources industries. Topics may include but are not limited to human relationships and effective communication, decision-making and problem-solving, leadership qualities and styles, and ensuring successful completion of group activities.
Particular Topics in Agribusiness	18204	These courses examine specific topics related to Agribusiness, such as international agriculture or commodities, rather than provide a general study of agribusiness principles.

Agriculture Computers and Technology	18205	Agriculture Computers and Technology courses help students develop their knowledge and skills in using computer and other technology to operate and manage agricultural businesses. These courses allow students to use computer hardware, software, and the Internet to find information, record and analyze financial and production data, track market trends and economic forecasts, monitor weather, utilize global positioning systems, and prepare communications and reports.
Research in Agriculture	18206	Allows students to prepare, conduct and evaluate science based projects as they relate to science in agriculture in the classroom, shop or greenhouse.
Applications in Agribusiness	18220	Provides students with the information and skills necessary for Career success in agribusiness and in the operation of entrepreneurial ventures. Topics include economic principles, budgeting, risk management, finance, business law, insurance and resource management. Other possible topics are: development of a business plan, employee/employer relations problem solving and decision making, using computers. A survey of the careers within the agricultural industry is also incorporated. This course focuses specifically on the marketing and promotional strategies for agricultural products. Students will develop a marketing plan for a specific product including target audience research and presentation skills. Agricultural sales techniques for products will also be covered.
Agribusiness—Independent Study	18247	Courses in Agribusiness—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to agribusiness. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agricultural Production	18301	Agricultural Production courses combine content related to animal and plant production, providing comprehensive coverage of the production functions of the agricultural industry. These courses typically cover such topics as care and management of farm animals, crop production and harvesting, plant and animal insect and disease control, efficient resource management, analyses of qualitative/quantitative data for decisionmaking, and farm management.
Agricultural Processing	18302	Agricultural Processing courses impart the knowledge and skills needed to bring animal and plant products to market. They may cover a wide variety of topics, including care and maintenance of animals or plants, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Agricultural Processing courses may present an overview of agricultural processing or may specialize in particular types of products.

Plant Processing	18303	Plant Processing courses impart the knowledge and skills needed to bring plant products to market. They may cover a wide variety of topics, including plant production, quality selection and preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Plant Processing courses may present an overview of product processing or may specialize in specific plant products.
Animal Processing	18304	Animal Processing courses impart the knowledge and skills needed to bring animal products to market. Although these courses may present an overview of animal care and maintenance, they typically emphasize quality selection, product preservation, equipment care and sanitation, government regulations, and marketing and consumer trends. Animal Processing courses may present an overview of several types of animal products or may specialize in particular products, such as meat, leather, wool, dairy products, and so on.
Food Product Processing	18305	Food Product Processing courses impart the knowledge and skills needed to produce and manufacture food products for the consumer market. These courses focus on food products while covering a variety of topics, such as quality selection and preservation, equipment care and sanitation, government regulations, marketing, consumer trends, and product research and development.
Aquaculture	18306	Aquaculture courses impart the knowledge and skills needed for producing fish, plants, and other species living in an aquatic environment, and course topics typically include the selection, propagation, harvesting, and marketing of those species. Instruction may also address aquatic and marine biology, ecosystems, water quality and management, and business practices.
Animal Science II	18307	Courses impart information about the causes, diagnosis, & treatment of diseases & injuries of animals, typically emphasizing domestic and farm animals. Topics focus on anatomy & physiology, nutrition, behavior, & reproduction, but may also include other areas of study as appropriate.
Particular Topics in Agricultural Production/Processing	18309	These courses examine specific topics related to producing and processing agricultural products (such as meat cutting) rather than provide a general study of production or processing.
Sustainable/Alternative Agriculture	18310	Sustainable/Alternative Agriculture courses explore technological and environmental changes and concerns. These courses address alternative approaches to food production including, but not limited to, organics, low-input, natural, and sustainable production methodology and practices. Course content may include comparing the effects of alternative production practices to those of conventional production practices.

Viticulture	18311	Viticulture courses prepare students for further studies in grape-growing, viticulture, and wine-making industry. Course topics typically include establishing and managing vineyards; harvesting; fermentation and wine making; marketing; and exploring career options within the industry. Agricultural applications specific to vineyards and wineries are emphasized.
Food Science II	18317	Allows students to develop knowledge and skills used by the food supply careers as a nutritionist, food chemist, chef, or process engineer. Emphasis will be placed on food chemistry, nutrition and digestion, quality food factors, food safety and biotechnology. Students will be able to explore food preparation of another country and to understand and appreciate ethnic foods from a global perspective which includes hands on laboratory experiences.
Applications in Ag Biotechnology	18320	Introduces theory and methods relating to applications of biotechnology in agriculture. The course emphasizes emerging laboratory technologies in the area of agricultural biotechnology including food and natural resource management. The course will explore plan and animal genetic engineering, alternative fuel production, food production, agricultural pests and controls, and other topics.
Agricultural Production and Processing—Independent Study	18347	Courses in Agricultural Production and Processing—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to agricultural production and processing. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agriculture Mechanics/Equipment/Structures	18401	Agriculture Mechanics/Equipment/Structures courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the industry. While learning to apply their knowledge of the basic principles of technological design and production skills (engine mechanics, power systems, welding, and carpentry, among others), students may explore a broad range of topics, including the operation, mechanics, and care of tools and machines; the construction and repair of structures integral to agricultural operations; a study of electricity and power principles; and the study of alternative fuels, technology and engineering, and safety procedures.
Agriculture Mechanics and Equipment	18402	Agriculture Mechanics and Equipment courses provide students with the engineering, power, and mechanical technology principles, skills, and knowledge that are specifically applicable to the agricultural industry. Typical topics include the operation, maintenance, and repair of power, electrical, hydraulic, pneumatic, renewable, wind, solar, and mechanical systems.

Agriculture Structures	18403	Agriculture Structures courses provide students with the skills and knowledge that are specifically applicable to the construction, maintenance, and repair of structures integral to the agricultural industry, including but not limited to animal enclosures, irrigation systems, and storage facilities. In these courses, students typically study technology, design, planning, and construction knowledge and skills (such as measurement, carpentry, plumbing, concrete, and electrical systems), in addition to the safe operation of tools, technology and machines.
Agricultural Metal Fabrication Technology	18404	Formerly known as Agriculture Welding, Agricultural Metal Fabrication Technology courses provide students with the skills and knowledge that are specifically applicable to the tools and equipment used in the industry. In learning to apply basic technical knowledge and skills (engines, power, welding, and structures, among others), students may explore a broad range of topics, including the operation, mechanics, and care of tools, technology and machines; the construction and repair of structures integral to agricultural operations; an introduction or review of electricity and power; and safety procedures.
Particular Topics in Agricultural Mechanics and Construction	18405	These courses examine specific topics related to agricultural mechanics and construction, such as specific vehicles or structures, rather than provide a general study of mechanics and construction techniques.
Water Treatment	18406	Water Treatment courses provide instruction regarding the environmental hazards associated with identifying and accepting waste water disposal. Course topics typically include waste water, the steps in waste water treatment, compliance with applicable regulations, and the use of water-testing instruments and water-treatment equipment to treat wastewater.
Advanced Agricultural Welding	18407	Courses provide students with the skills & knowledge that are specifically applicable to the welding industry with advance blueprint reading and welding in the OH, V and H position along with pipe welding and TIG welding that could result in welding certification.
Agricultural Welding III	18408	The student will gain skills and knowledge for the G.T.A.W. (Gas tungsten arc welding) process. Equipment setup, welding safety, welding in the flat and horizontal position and perform visual inspection of welds. This course ties in with the AWS SENSE certification and is articulated to post – secondary.
Agricultural Fabrication	18409	Courses provide students with the skills & knowledge that are specifically applicable to the construction, maintenance, and repair of structures integral to the agricultural industry, including but not limited to animal enclosures, irrigation systems, & storage facilities. In these courses, students typically study design, planning, & construction knowledge & skills (such as survey, carpentry, plumbing, concrete, & electrical systems), in addition to the safe operation of tools and machines

Small Gas Engines	18410	Courses provide students with the opportunity to learn how to service & recondition small engines, typically emphasizing two and four-cycle engines. Courses provide student with opportunities to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; and read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools.
Agricultural Power	18411	Courses enable students to understand the principles underlying various kinds of mechanics (aircraft, auto, diesel, & marine) and how energy is converted, transmitted, & controlled. Topics typically include maintaining & servicing machines, engines & devices while emphasizing energy sources, electricity, and power transmission. The courses may also provide information on career opportunities within the field of mechanics and/or transportation.
Agricultural Metals	18412	Course provide instruction in layout and design of metal skills, soldering, brazing and other cold metal work.
Agricultural Plastics	18413	Course provides students the opportunity to explore plastics in Agriculture and how plastics are used in the Ag Industry.
Agricultural Welding IV	18414	The student will gain necessary knowledge and skills for S.M.A.W (shielded metal arc welding) G.M.A.W (Gas Metal Arc Welding) G.T.A.W for the AWS SENSE welding certification. Additional course work in basic math and metal measurements, use of blueprints and symbols in welding designs, and basic metallurgy and metal identification will complete the welding certification.
Agricultural Mechanics and Construction—Independent Study	18447	Courses in Agricultural Mechanics and Construction—Independent Study, often conducted with instructors as mentors, enable students to topics of interest related to agricultural mechanics and/or construction. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Wildlife and Recreation Management	18501	Formerly known as Wildlife Management, Wildlife and Recreation Management courses provide students with the opportunity to understand and appreciate the importance of maintaining the land and ecological systems that enable nondomesticated animals to thrive. These courses emphasize how humans and animals may both take advantage of the same land or how to gain economic benefits from the land while not degrading its natural resources or depleting plant or animal populations. Students may also learn how to manage wildlife and lands for recreational purposes.

Forestry Management	18502	Formerly known as Forestry, Forestry Management courses provide students with the information and experience necessary for the cultivation, management, and care of forests or timberlands. These courses cover topics such as the processes of regeneration and reforestation, harvesting and conservation of natural resources, erosion and pest control, trail development and maintenance, mapping and surveying, operation of forestry tools, government regulations, environmental stewardship, and urban forestry, including the principles of selecting, planting, and caring for trees in urban settings. Settings may include streets, parks, commercial/industrial landscape settings, and recreational use of forests. These courses also address forestry harvesting and methods to manage, protect, and harvest timber stands and specialty forest crops; equipment maintenance and repair; the selection, planting, transplanting, and harvesting of trees; forest management; and safety procedures.
Natural Resources Management	18504	Natural Resources Management courses combine the fields of ecology and conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources management, these courses usually cover specific topics and uses, such as hunting or fishing preserves, safe usage initiatives, forest production and management, wildlife preservation, and commercial use of natural resources.
Particular Topics in Natural Resources	18505	These courses examine specific topics related to natural resources, such as urban forestry or hunter education, rather than provide a general study of natural resource principles and topics.
Environmental Resouces and Wildlife	18506	Courses combine the fields of ecology & conservation with planning for the efficient use and preservation of land, water, wildlife, and forests. Within the general area of natural resources management, these courses usually cover specific topics & uses, such as hunting or fishing preserves, forest production and management, wildlife ID, production and/or ecosystems management and preservation, and human outdoor recreation.
Alternative Energy	18506	Alternative Energy courses help students identify renewable and nonrenewable energy sources and natural resources. Topics typically include alternative energy sources and their respective advantages and disadvantages; the impact of conventional and alternative energy sources on the environment; the efficiency of energy production from various sources; and careers in the fields of alternative energy and sustainability.
Energy Resources in Agriculture	18507	Course will cover the modern sources of energy that are used in agriculture related to wind, ethanol, and Biodiesel fuels.

Natural Resources—Independent Study	18547	Courses in Natural Resources—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to natural resources. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Agriculture, Food, and Natural Resources—Independent Study	18997	Courses in Agriculture, Food, and Natural Resources—Independent Study, often conducted with instructors as mentors, enable students to explore topic of interest related to agriculture, food, and natural resources. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Human Services Career Exploration	19001	Human Services Career Exploration courses introduce and expose students to career opportunities pertaining to the provision of individual, family, personal, and consumer services for other human beings. Course topics vary and may include, but are not limited to, child development and services, counseling and mental health services, family and community services, personal care services, and consumer services. Course activities depend upon the careers being explored.
Child Care	19051	Child Care courses provide students with knowledge about the physical, mental, emotional, and social growth and development of children from birth through pre-school age. Main topics include the fundamentals of working with infants, toddlers, and older children; providing healthy environments; evaluating child care settings; and examining the practices, regulations, and opportunities in the child care industry. Often Child Care courses provide students with practical experience, including observation time in a child care center. Advanced topics may include various learning theories; development of activities; operation of a child care center; recognition of childhood diseases, abuse, and neglect; and first aid/emergency training.
Child Development	19052	Child Development courses provide students with knowledge about the physical, mental, emotional, social, and moral growth and development of children from conception to pre-school age, emphasizing the application of this knowledge in child care settings and/or home environments. Brain development and current developmental research are addressed. These courses typically include related topics such as the appropriate care of infants, toddlers, and young children.
Elder Care	19053	Elder Care courses emphasize the care of human beings as they grow older. These courses involve the study of the biological, physiological, social, and psychological needs and concerns of the elderly, and deal with economic and legal issues, the aging process, death, and dying in a realistic manner. Elder Care courses may cover work and personal habits appropriate to the field, and may also offer the opportunity to explore various careers.

Caregiving Service	19054	Formerly known as Caregiving Service, Child and Adult Care Services courses emphasize the care of human beings who are unable or who need assistance to care for themselves. These courses involve the study of the biological, physiological, social, and psychological needs and concerns of young children, the elderly, and/or the disabled. Additional topics may include economic and legal issues, planning daily routines; appropriate environments and activities; growth and aging processes; and techniques for managing a center or working in others' homes.
Particular Topics in Child and Elder Care	19055	These courses examine specific topics related to child and elder care, such as regulations of the industry or caring for people with special needs, rather than providing a general study of child and elder care.
Child and Elder Care—Independent Study	19097	Child and Elder Care—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to child and elder care. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Teaching Profession	19151	Teaching Profession courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership and human relations skills, assessment of student progress, teaching strategies, and various career opportunities in the field of education.
Educational Methodology	19152	Educational Methodology courses prepare students to teach and guide others. These courses typically provide opportunities for students to develop their own teaching objectives, to design lesson plans, and to experience teaching in a controlled environment. Students examine and practice teaching strategies, learning styles, time management and planning strategies, presentation and questioning skills, classroom management, and evaluation techniques.
Teaching - Early Childhood Education	19153	Formerly known as Early Childhood Education, Teaching—Early Childhood Education courses address child development and education issues, so that students can guide the development of children in educational settings. These courses typically include the planning and implementing of developmentally appropriate learning activities, health and safety practices, safe learning environments, and legal requirements for teaching young children.
Particular Topics in Education	19154	These courses examine specific topics in education other than those already described, such as management of school-age children, rather than providing a general study of the teaching profession.

Teaching as a Career	19155	Courses introduce students to the principles underlying teaching and learning, the responsibilities and duties of teachers, and the techniques of imparting knowledge and information. These courses typically expose students to and train them in classroom management, student behavior, leadership, and human relations skills, assessment of student progress, teaching strategies and various career opportunities in the field of education. This course includes advanced work experience opportunities.
Education—Independent Study	19197	Education—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to education. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Clothing and Textiles	19201	Clothing and Textiles courses introduce students to and expand upon the various aspects of apparel, garment construction, and the textile industry, conveying the commercial application of design principles, production processes, and maintenance techniques. These courses usually address the selection, characteristics, care, and repair of various textiles; operation and care of commercial sewing machines; design, construction, and production of fabrics and/or garments; and career opportunities in the garment or textile industry.
Clothing/Textile Maintenance	19202	Clothing/Textile Maintenance courses provide students with the knowledge and skills to clean, care for, and maintain clothing and textiles. Course topics typically include dry cleaning and laundering techniques, identifying fabrics and the optimal cleaning agents and processes, instruction in altering and repairing garments, and the safe use of the equipment, tools, and agents.
Apparel Construction	19203	Apparel Construction courses provide students with the knowledge and skill to construct, alter, and repair clothing and textile products. Course topics typically include taking measurements, creating and preparing patterns, and various sewing techniques; topics may also include customer service, fashion design principles, and business management. These courses may also offer specialized knowledge in a particular type of garment.
Apparel and Textile Services	19204	Apparel and Textile Services courses introduce students to and expand upon various services that concern the care and maintenance of apparel, textiles, and furnishing. Course topics may include upholstery, dry cleaning, commercial sewing, and tailoring.

Home Furnishing	19205	Home Furnishing courses provide students with basic knowledge regarding furnishing and decorating home environments. While exploring design principles, personal or customer needs and style, and decisionmaking, students may also explore the following topics: color, texture, furniture styles and arrangement, lighting, window treatments, floor and wall coverings, and home improvement/modification. Home Furnishing courses may also cover architectural style and design and take a larger look at housing problems or current housing issues.
Home Furnishings Production	19206	Home Furnishings Production courses enable students to plan, select, and construct upholstery, slip covers, draperies and other window treatments, and other home accessories. Some courses may emphasize upholstery exclusively. Course content typically includes proper use of equipment, interior decorating principles, and employability skills.
Particular Topics in Apparel and Furnishings	19207	These courses examine specific topics in apparel and furnishings other than those already described, such as tailoring or shoe repair, rather than providing a general study.
Apparel and Furnishings—Independent Study	19247	Apparel and Furnishings—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to apparel, textiles, and furnishings. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Counseling and Mental Health	19301	Counseling and Mental Health courses provide students with the knowledge and skills necessary to pursue a counseling and mental health career through simulated environments. These courses allow students to apply their knowledge of ethical and legal responsibilities, the limitations of these responsibilities, and the implications of their actions.
Human Services—Independent Study	19997	Human Services—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to providing human services. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Exploration of Transportation, Distribution and Logistics	20001	Exploration of Transportation, Distribution, and Logistics courses introduce students to careers that involve the planning, management, and movement of people, materials, and products using any of several modes of transport. Such careers may also involve infrastructure, vehicular maintenance and repair, and operating or managing facilities that hold what is being transported. Therefore, specific course topics vary widely and depend upon the careers being explored.

Truck and Bus Driving	20051	Truck and Bus Driving courses instruct students in the proper and safe handling and operation of trucks and buses. Strategies for driving in hazardous conditions, observing laws and regulations, loading cargo or passengers, documenting cargo loads, and expectations of driving careers are all typical course topics.
Heavy Equipment Operation	20052	Heavy Equipment Operation courses enable students to safely operate the heavy equipment used for mining, construction, and utility industries. Typically, courses also include light maintenance principles and techniques.
Aviation	20053	Aviation courses provide students with an understanding of the science of flight and typically include the history, regulations, and possible career paths within the aviation industry. Aviation courses usually cover physics, the relationships of weight and balance, principles of navigation and flight control, ground and airport operations and services, and Federal Aviation Agency regulations.
Boat Operation	20054	Boat Operation courses typically cover operation and maintenance of marine vehicles, marine navigation, and emergency procedures, as well as other skills necessary or useful for work or life at sea (e.g., loading and unloading or cooking). Specific topics may include docking and undocking a vessel, engine maintenance, commercial fishing, firefighting aboard ship, and CPR.
Pilot Training	20055	Pilot Training courses prepare students to become pilots by participating in flight training, ground school, and simulator instruction. Topics covered typically include preflight operations; flight maneuvering with reference to ground objects; flying at critically slow air speeds and recovering from stalls; takeoffs and landings; controlling and maneuvering an aircraft; cross country flying; night flying; and emergency operation. Other course content may include meteorology, aerodynamics, navigation, physiology, and airfield and flight environments.
Operation—Independent Study	20097	Operation—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to the operation of vehicles. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Energy/Power	20101	Energy/Power courses focus on one or several aspects of energy and power in transportation and work. Course content may include various sources of energy and their use in society (for example, characteristics, availability, conversion, storage, environmental impact, and socioeconomic aspects of various energy sources); principles involved in various means of energy transfer, such as electricity/electronics, hydraulics, pneumatics, heat transfer, and wind/nuclear/solar energies; and the transmission and control of power through mechanical or electrical devices such as motors and engines.

Power and Mechanics	20102	Power and Mechanics courses enable students to understand the principles underlying various kinds of mechanics (aircraft, auto, diesel, and marine) and how energy is converted, transmitted, and controlled. Topics typically include maintaining and servicing machines, engines, and devices while emphasizing energy sources, electricity, and power transmission. The courses may also provide information on career opportunities within the field of mechanics and/or transportation.
Introduction to Automobiles	20103	Primarily intended as a personal automobile mechanics course, but also useful for students exploring future careers in automotive technologies, Introduction to Automobiles courses expose students to the various mechanical systems in automobiles and provide basic experience in maintenance tasks. The course may also cover career opportunities in the automotive and/or transportation fields.
Automotive Mechanics—Comprehensive	20104	Automotive Mechanics—Comprehensive courses emphasize the diagnosis and repair of automobile engines and support systems such as brakes, cooling, drive trains, electrical/electronics components, emission, fuel, ignition, steering, suspension, and transmissions. Course topics often include the comprehension and use of repair manuals, safety, and employability skills (including shop management and entrepreneurship).
Particular Topics in Automotive Mechanics	20105	These courses provide instruction in the mechanics of a particular system or condition, such as transmissions, brakes, fuel, exhaust, or electrical systems, rather than providing a general study of diagnosis and repair of automobile mechanics.
Automotive Service	20106	Automotive Service courses emphasize preventative auto maintenance and automobile troubleshooting. Course content typically includes tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, suspension, and transmission systems. These courses may also include public relations, sales techniques, and service station management.
Diesel Mechanics—Comprehensive	20107	Diesel Mechanics—Comprehensive courses prepare students to maintain and repair diesel engines and related systems. Specific course topics may include principles underlying diesel engines, analyzing electrical circuits and systems, troubleshooting and repairing cooling systems, testing and repairing air conditioning charging systems, reading and interpreting service manuals, and identifying the principles and components of fuel injection systems. Courses may also cover safety, employability skills, and entrepreneurship.
Particular Topics in Diesel Mechanics	20108	These courses cover specific topics relevant to occupations involving the maintenance and repair of vehicles with diesel engines, such as buses and trucks. One topic (or several closely related topics) concerning diesel mechanics is covered in specific detail in this type of course.

Small Vehicle Mechanics	20109	Small Vehicle Mechanics courses equip students with the knowledge and skill to repair and maintain engines in small vehicles (e.g., motorcycles, all-terrain vehicles, snowmobiles, and mopeds). Topics include (but are not limited to) maintaining frames and suspension, wheels and brakes, and drive trains; servicing fuel, exhaust, and electrical systems; performing tune-ups; and maintaining and repairing engines. Students may also learn safety on the job, employability skills, and entrepreneurship.
Small Engine Mechanics	20110	Small Engine Mechanics courses provide students with the opportunity to learn how to service and recondition small engines, typically emphasizing two- and four-cycle engines. These courses provide students with opportunities to troubleshoot and repair speed controls, lubrication, ignition, fuel, power transfer, cooling, exhaust, and starting systems; use hand, power, and overhaul tools; and read and interpret service manuals and parts' catalogs. Applications may include lawn mowers, tractors, tillers, power tools, and so on.
Marine Mechanics	20111	The content of Marine Mechanics courses includes the service and repair of electrical, mechanical, power transfer, hydraulic, fuel, and cooling systems as applied to boat and/or ship engines; boat rigging; trailers; and marine-related merchandise. Courses may also cover communication, human relations, and employability skills, as well as safe, efficient work practices.
Heavy Equipment Mechanics	20112	Heavy Equipment Mechanics courses include the service and repair of electrical, mechanical, power transfer, hydraulic, fuel, and cooling systems of heavy equipment such as that used in mining, construction, and utility industries.
Aircraft Power Plant	20113	Aircraft Power Plant courses provide students with the information necessary to troubleshoot, test, repair, and install aircraft engines. Course content usually includes engine ignition, electrical, lubrication, cooling, exhaust, and fuel systems, along with aircraft instrumentation and safety features.
Aircraft Airframe	20114	Aircraft Airframe courses offer students information and instruction related to the structure and mechanics of aircraft, typically including hydraulic, pneumatic, instrumental, fuel, electrical, cabin atmosphere, and landing gear systems. Aircraft Airframe courses may also cover aircraft metals and coverings and related welding skills.
Automotive Detailing and Reconditioning	20115	Automotive Detailing and Reconditioning courses provide students with knowledge and skills related to repairing, refinishing, and detailing automobiles. Course topics typically include painting and refinishing, plastics and adhesives, damage analysis, and repair, in addition to occupational safety, employability, and entrepreneurship skills.

Automotive Body Repair and Refinishing—Comprehensive	20116	Automotive Body Repair and Refinishing courses provide students with knowledge and skills regarding the repair and refinishing of damaged or used cars. Course content may include (but is not limited to) stretching and shrinking auto body sheet metal; welding skills; frame and metal straightening; repair of fiberglass and synthetic materials; removing, repairing, and installing auto body parts such as panels, hoods, doors, and windows/glass; preparing vehicles and vehicle surfaces for refinishing; painting; applying body fillers; and estimating material and labor costs.
Particular Topics in Automotive Body Repair and Refinishing	20117	These courses provide specific instruction in individual topics relevant to the repair and refinishing of automobile bodies and surfaces. One topic or several closely related topics (such as nonstructural part replacement, auto body welding, or plastic repair) receive particular attention in this type of course.
Boat Repair/Refinishing	20118	Boat Repair/Refinishing courses convey a broad range of information and skills about how to repair and refinish boat mechanics, structures, and surfaces. In these courses, students become proficient in marine terminology, learn how to describe types of marine manufacturing and occupations, and prepare new and existing wood, fiberglass, and metal surfaces for painting or refinishing. These courses often cover safety, employability skills, and entrepreneurship.
Hybrid Engines	20119	Hybrid Engines courses introduce students to the fundamentals of hybrid electric vehicles. These courses explore the hybrid power plant and may include such topics as hybrid batteries, high- and low-voltage systems, inverters, safety procedures, hybrid maintenance and diagnostics, and alternative fuels.
Motorsports Technology	20120	Motorsports Technology courses provide students with an understanding of the principles of race car fabrication and all facets of the racing industry. Technical aspects of the courses may include skill development in vehicle assembly of high-performance engines and components using specialty tools, welding, and auto body procedures. Course content may also explore the motorsports technology industry, address safety issues, and identify careers in the field.
Mechanics and Repair—Independent Study	20147	Mechanics and Repair—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to the maintenance of vehicles and engines. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Distribution—Comprehensive	20151	Distribution—Comprehensive courses provide students with knowledge and skills related to the safe and efficient delivery of commodities to various markets. Course content typically includes the comparative advantages of various forms of transportation, distribution networks, processes for tracking large shipments of material, transportation of goods in a safe and secure manner, and packaging.

Warehouse Operations	20152	Warehouse Operations courses convey the principles and processes underlying the receiving, loading and unloading, tracking, and storing of large quantities of materials. Course topics typically include a variety of logistical implications for moving materials by several different modes of transportation, safety and security, and appropriate storage techniques.
Distribution and Logistics—Independent Study	20197	Distribution and Logistics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to distribution and logistics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Transportation, Distribution and Logistics—Independent Study	20997	Transportation, Distribution, and Logistics—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to transportation, distribution, and logistics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Pre-Engineering Technology	21001	Pre-Engineering Technology courses integrate technology-oriented applications of mathematics and science into pre-engineering activities for students. Course topics may include material sciences, technology processes, enterprises, and career opportunities.
Engineering Applications	21002	Engineering Applications courses provide students with an overview of the practical uses of a variety of engineering applications. Topics covered usually include hydraulics, pneumatics, computer interfacing, robotics, computer-aided design, computer numerical control, and electronics.
Engineering Technology	21003	Engineering Technology courses provide students with the opportunity to focus on one or more areas of industrial technology. Students apply technological processes to solve real engineering problems; develop the knowledge and skills to design, modify, use, and apply technology; and may also design and build prototypes and working models. Topics covered in the course include the nature of technology, use of technology, and design processes.
Principles of Engineering	21004	Principles of Engineering courses provide students with an understanding of the engineering/technology field. Students typically explore how engineers use various technology systems and manufacturing processes to solve problems; they may also gain an appreciation of the social and political consequences of technological change.

Engineering—Comprehensive	21005	Engineering—Comprehensive courses introduce students to and expand their knowledge of major engineering concepts such as modeling, systems, design, optimization, technology-society interaction, and ethics. Particular topics often include applied engineering graphic systems, communicating technical information, engineering design principles, material science, research and development processes, and manufacturing techniques and systems. The courses may also cover the opportunities and challenges in various branches of engineering.
Engineering Design	21006	Engineering Design courses offer students experience in solving problems by applying a design development process. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models.
Engineering Design and Development	21007	Engineering Design and Development courses provide students with the opportunity to apply engineering research principles as they design and construct a solution to an engineering problem. Students typically develop and test solutions using computer simulations or models but eventually create a working prototype as part of the design solution.
Digital Electronics	21008	Digital Electronics courses teach students how to use applied logic in the development of electronic circuits and devices. Students may use computer simulation software to design and test digital circuitry prior to the actual construction of circuits and devices.
Robotics	21009	Robotics courses help students develop and expand their skills and knowledge of robotics and related scientific and engineering topics. Course topics may include principles of mechanics, electronics, hydraulics, pneumatics, programmable logic controllers. These courses may emphasize the use of engineering principles to design and build robots, construct and connect sensors, and program robots in the programming language.
Computer Integrated Manufacturing	21010	Computer Integrated Manufacturing courses involve the study of robotics and automation. Building on computer solid modeling skills, students may use computer numerical control (CNC) equipment to produce actual models of their three-dimensional designs. Course topics may also include fundamental concepts of robotics, automated manufacturing, and design analysis.
Civil Engineering	21011	Civil Engineering courses expose students to the concepts and skills used by urban planners, developers, and builders. Students may be trained in soil sampling and analysis, topography and surveying, and drafting or blueprint-reading. Additional course topics may include traffic analysis, geologic principles, and urban design.

Civil Engineering and Architecture	21012	Civil Engineering and Architecture courses provide students with an overview of the fields of Civil Engineering and Architecture while emphasizing the interrelationship of both fields. Students typically use software to address real world problems and to communicate the solutions that they develop. Course topics typically include the roles of civil engineers and architects, project-planning, site-planning, building design, project documentation, and presentation.
Biotechnical Engineering	21014	Biotechnical Engineering courses enable students to develop and expand their knowledge and skills in biology, physics, technology, and mathematics. Course content may vary widely, drawing upon diverse fields such as biomedical engineering, biomolecular genetics, bioprocess engineering, agricultural biology, or environmental engineering. Students may engage in problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interfaces, bioprocesses, forensics, and bioethics.
Particular Topics in Engineering	21015	These courses examine specific topics in engineering other than those already described.
Engineering Analysis	21016	Engineering Analysis courses help students apply engineering design processes to areas of the designed world, explore ethics in a technological world, and examine systems in civil, mechanical, electrical, and chemical engineering. These courses may provide STEM-based projects to teach students to communicate information through team-based presentations, proposals, and technical reports.
Engineering—Independent Study	21047	Engineering—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to engineering. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Technological Literacy	21051	Technological Literacy courses expose students to the communication, transportation, energy, production, biotechnology, and integrated technology systems and processes that affect their lives. The study of these processes enables students to better understand technological systems and their applications and uses.
Technological Processes	21052	Technological Processes courses provide students with the opportunity to focus on one or more areas of industrial technology, applying technological processes to solve real problems and developing the knowledge and skills to design, modify, use, and apply technology appropriately. Students may examine case studies, explore simulations, or design and build prototypes and working models.

Emerging Technologies	21053	Emerging Technologies courses expose students to and help them understand new and emerging technologies. The range of technological issues covered in this course can vary widely and content covered can be flexible. Topics covered may include, but are not limited to, lasers, fiber optics, robotics, and transportation technologies.
Technology Innovation and Assessment	21054	Technology Innovation and Assessment courses use engineering design activities to help students understand how criteria, constraints, and processes affect design solutions and provide students with the skills to systematically assess technological developments or solutions. Course topics may include brainstorming, visualizing, modeling, simulating, constructing, testing, and refining designs.
Aerospace Technology	21055	Aerospace Technology courses introduce students to the technology systems used in the aerospace industry and their interrelationships. Examples of such systems include satellite communications systems, composite materials in airframe manufacturing, space station constructions techniques, space shuttle propulsion systems, aerostatics, and aerodynamics.
Particular Topics in Technology Applications	21056	These courses examine specific topics in technology applications other than those already described.
Laser/Fiber Optics	21057	Laser/Fiber Optics courses cover the history, safety, and theory of laser light and laser systems. In these courses, various laser system configurations and operations are examined.
Geospatial Technology	21058	Geospatial Technology courses provide students with experiences pertaining to the study of geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), digital image processing simulator (DIPS), Geodesy, automated cartography (Auto-Carto), land surveying (LS), and navigation. These courses may use spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing geographic data, with a focus on both the implications and limitations of such technologies. Other topics may include interfacing with telecommunications and automated database management systems.
Modeling and Simulation Technology	21059	Modeling and Simulation Technology courses allow students to explore the use of modeling, simulation, and game development software to solve real-world problems in science, technology, engineering, and mathematics (STEM). These courses typically address the systems, processes, tools, and implications of the field of modeling and simulation technology. Courses topics may also include evaluating and testing engineering designs, modeling geospatial data, observing and analyzing physics simulations, programming games for educational purposes, and creating visualization systems with 3D models.

Wind Energy	21060	Wind Energy courses introduce students to the terminology and other aspects of the wind industry. Course topics may include, but are not limited to, the history and development of the wind industry, types and applications of various wind turbines, environmental and economic issues of the wind industry, and the future of the industry.
Wind Turbine Construction and Operation	21061	Wind Turbine Construction and Operation courses provide students with an understanding of wind turbine operation and the wind energy industry. These course enable students to study site preparation and construction, turbine component specifications and manufacturing, operation and maintenance programs, and data acquisition and assessment.
Technology—Independent Study	21097	Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to technology systems and processes. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Drafting Careers Exploration	21101	Geared for students with an interest in careers that use drafting skills and applications, Drafting Careers Exploration courses expose students to the opportunities available for draftspeople (engineering, architectural, industrial, and so on). These courses serve to introduce basic skills and the field in general, providing students with the opportunity to identify a focus for continued study or to determine that their interests lie elsewhere.
Drafting—General	21102	Drafting—General courses introduce students to the technical craft of drawing illustrations to represent and/or analyze design specifications and then refine the skills necessary for this craft. Drafting—General courses use exercises from a variety of applications to provide to students the knowledge and experience to develop the ability to perform freehand sketching, lettering, geometric construction, and multiview projections and to produce various types of drawings (working, detail, assembly, schematic, perspective, and so on). Computer-aided drafting (CAD) systems (if available) are typically introduced and used to fulfill course objectives.
Drafting—Architectural	21103	Drafting—Architectural courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from architectural applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on interior and exterior residential (and light commercial) design, site orientation, floor plans, electrical plans, design sketches, and presentation drawings. In addition, students may prepare scale models.

Drafting—Civil/Structural	21104	Drafting—Civil/Structural courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from civil engineering and/or structural applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on skills needed for typography and survey work.
Drafting—Electrical/Electronic	21105	Drafting—Electrical/Electronic courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from electric and/or electronic fields. These courses are intended to help students develop general drafting skills, but place a particular emphasis on those skills needed for electrical and electronic schematics.
Drafting—Technical/Mechanical	21106	Drafting—Technical/Mechanical courses introduce students to and help them refine the technical craft of drawing illustrations to represent and/or analyze design specifications, using examples drawn from industrial applications. These courses are intended to help students develop general drafting skills, but place a particular emphasis on sectioning, auxiliary views, revolutions, and surface development. In these courses, students typically learn basic machining and fabrication processes as they draw schematic diagrams featuring cams, gears, linkages, levers, pulleys, and so on.
CAD Design and Software	21107	Frequently offered as an intermediary step to more advanced drafting courses (or as a concurrent course), CAD Design and Software courses introduce students to the computer-aided drafting systems available in the industry.
Blueprint Reading	21108	Blueprint Reading courses provide students with the knowledge and ability to interpret the lines, symbols, and conventions of drafted blueprints. They generally emphasize interpreting, not producing, blueprints, although the courses may provide both types of experiences. Blueprint Reading courses typically use examples from a wide variety of industrial and technological applications.
Research and Design from Pre-Construction	21109	Advanced research and application course that covers specific topics in design & pre-construction (drafting/architecture) to include management and “green design” skills.
AP Seminar	22110	Designed by the College Board to parallel college-level courses in critical thinking and communications, AP Seminar courses provide students with the opportunity to explore complex real world issues through cross-curricular lenses. Course topics vary and may include local, civic, or global issues and interdisciplinary subject areas. Courses typically emphasize research, communication, and critical-thinking skills to explore the issues addressed. Students may also examine source materials such as articles and other texts; speeches and personal accounts; and relevant artistic and literary works.

GIS Technology	21111	GIS Technology courses provide familiarity with tools necessary to design and utilize discipline specific data. Areas covered are: Mapping, Cartography and Computer Assisted Drafting, Photogrammetry and Remote Sensing, Spatial Statistics, and Geographic Information Display Systems. Students will learn to identify appropriate tools for specific tasks and work with data input from maps, aerial photos, and satellite imagery to build further representation utilizing the tools covered.
GIS Spatial Application	21112	GIS Spatial Applications courses apply technology skills to build and utilize representations of three-dimensional space to provide location information, data collection, and statistical information to build representations appropriate for use in areas such as conservation, urban planning, flight, human networks, geographic surveying and topography, and patterns and processes related to multidimensional data.
Drafting—Independent Study	21147	Drafting—Independent Study courses, often conducted with instructors as mentors, enable students to explore drafting-related topics of interest. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Advanced Drafting/CAD	21150	An advanced level course that provides students with the knowledge and skills needed to utilize CAD design and software.
Foundations of Electronics	21201	Foundations of Electronics courses offer instruction in the basic concepts of electronics and electronic components; electrical quantities and units; basic circuits, laws and measurements; circuit components; multiple-load circuits; complex-circuit analysis; magnetism and electromagnetism; alternating current and voltage; power in ac circuits; capacitance; inductance; transformers; R, C, and L circuits; electric motors; instruments and measurements; algebraic, trigonometric, and logarithmic tenets as applied to electronic components, theory of electricity and in the terminology, skills, and safety procedures common to careers involving electricity and electronics. Students will demonstrate acceptable soldering and de-soldering techniques, knowledge of surface mount technology, methods for building circuitry and proper utilization of electronic components such as capacitors, LEDs, and transistors.

Project Management and Resource Scheduling	21205	Project Management courses provide students with the information and skills necessary for success in managing projects and operating logistical ventures in technology, business, and industry. This course covers scheduling of resources (including personnel, budget, timelines, and equipment), utilization of Gantt charts, economic principles within the workplace, and risk management. Other possible topics include developing a business plan, finance, business law, marketing and promotion strategies, insurance employee/employer relations, problem-solving and decision-making, and building leadership skills. These courses may also incorporate a survey of the careers within technology and engineering industries.
Materials Science and Engineering	21252	Materials Science and Engineering courses expose students to the tools, machines, and processes that may be encountered in the interface between manufacturing and engineering. In particular, these courses stress the study of properties and analysis of those materials: testing and processing metals, plastics, woods, ceramics, and composite materials utilized in the process of constructing usable products. These courses enable students to experience development of an idea into a finished product, with instruction in planning, designing, selecting materials, and using appropriate tools and machines.
Engineering and Technology—Independent Study	21997	Engineering and Technology—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to engineering and/or technology. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Family and Consumer Science—Comprehensive	22201	Family and Consumer Science—Comprehensive courses are inclusive studies of the knowledge and skills that are useful for the efficient and productive management of the home. Course topics typically include foods and nutrition; clothing; child development and care; housing design, decoration, and maintenance; consumer decisions and personal financial management; and interpersonal relationships.
Food and Nutrition	22202	Food and Nutrition courses provide students with an understanding of food's role in society, instruction in how to plan and prepare meals, experience in the proper use of equipment and utensils, and background on the nutritional needs and requirements for healthy living. Some classes place a heavier emphasis on the nutritional components of a balanced diet, while others concentrate on specific types of food preparation. Although these courses may present career opportunities in the food service industry, their emphasis is not career-related.

Food Science	22203	Food Science courses offer opportunities to study the composition, structure, and properties of foods and the chemical changes that occur during the processing, storage, preparation, and consumption of food. These courses often explore the effects of various materials, microorganisms, and processes on food products through laboratory experiments.
Child Development/Parenting	22204	Child Development/Parenting courses provide students with knowledge about the physical, mental, emotional, and social growth and development of children from conception to pre-school age. In addition, these courses help students discover how parents should respond to the various stages of childhood. Course content typically includes topics such as prenatal and birth processes; responsibilities and difficulties of parenthood; fundamentals of children's emotional and physical development; and the appropriate care of infants, toddlers, and young children.
Clothing/Sewing	22205	Clothing/Sewing courses introduce students to and expand their knowledge of various aspects of wearing apparel, sewing, and fashion. These courses typically include wardrobe planning; selection, care, and repair of various materials; and construction of one or more garments. They may also include related topics, such as fashion design, fashion history, the social and psychological aspects of clothing, careers in the clothing industry, and craft sewing.
Consumer Economics/Personal Finance	22210	Consumer Economics/Personal Finance courses provide students with an understanding of the concepts and principles involved in managing one's personal finances. Topics may include savings and investing, credit, insurance, taxes and social security, spending patterns and budget planning, contracts, and consumer protection. These courses may also provide an overview of the American economy.
Home Décor	22211	Home Décor courses provide students with knowledge and skills regarding interior design and decoration of the home for the individual or family. While exploring design principles, personal needs and style, and decision-making, students may have an opportunity to explore such topics as color, texture, furniture styles and arrangement, lighting, window treatments, floor and wall coverings, and home improvement/modification. These courses emphasize personal (rather than commercial) use and application of home décor principles.
Interior Design	22212	An application course to instruct students in skills necessary to design interior spaces that acknowledge client needs, legislated codes, historic, current, and future trends, and public policy. The first half of this course would be taught to FACS students only. The Drafting students would have taken intro to drafting, followed by this in the second semester.

Nutrition and Health Science	22213	Nutrition & Health Science courses focus on biological systems and personal health topics such as nutrition, stress management, drug/alcohol abuse prevention as functions of biological impact on body systems. Key biological concepts addressed include: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease.
Family Studies B	22218	The Family Studies B course explores the roles and responsibilities of parents such as how society, media, technology and diversity impact their ability to balance work and family. It also includes the development of children and parents as their earliest teacher. Parenting styles and family stages are explored as is the changing demographics which will change the face of the US family. Occupations related to meeting the needs of families will be analyzed. This course will promote the creation of healthy and sustainable families be they their own or those they work with.
Consumer and Personal Finance B	22220	Consumer and Personal Finance B, explores the relationship of basic money management and consumer decision-making across the lifespan. It includes an in-depth look at risk management, use of credit, consumer rights and responsibilities, setting goals and impact of the family on personal financial decision making. How to make wise choices to develop a healthy financial self will be a major component of this course as well as an introduction to the occupations related to the field.
Family and Consumer Science—Independent Study	22247	Family and Consumer Science—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to home- and self-management. Independent Study courses may provide students with an opportunity to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.
Introduction to Drawing	30005	Introduction to Drawing emphasizes the development of fundamental drawing skills. Focus will be on the application of art theory, processes and techniques that increase the power of observation. Instruction includes the elements and principles of design as applied in composition through hard copy and/or electronic software.
21st Century Journalism	30100	21st Century Journalism promotes the development of the skill set needed today and in the future. Topics include an exploration of the role media and the communications industry has in society, the development of the technical skills related to journalistic writing and interviewing, as well as understand the ethical and legal issues related to the field.

Principles of Illustration	30101	A principle of Illustration explores a variety of media, tools and supports as a means to communicate ideas. Topics include an understanding of illustration as it applicable to careers in graphic design, animation, fashion/textile design, industrial design, web design, architecture, interior design and/or fine arts. Techniques in traditional and digital illustration applications will be explored as directly linked to ever-changing social trends.
Graphic Design Fundamentals	30102	Graphic Design Fundamentals provides a basic understanding of the graphic design process. Topics include analyzing the design elements and principles, exploring industry tools, software and equipment and learning composition techniques to develop a quality product.
Audio Video Production Fundamentals	30103	Audio Video Production Fundamentals provides a basic understanding of producing video for a variety of uses. Topics include analyzing the pre-production, production and post-production process, as well as explore the equipment and techniques used to develop a quality audio video product.
Digital Media Technology	30104	Digital Media Technology teaches the technical skills needed to work with electronic media. Topics include exploring the use of digital imaging and video today and in the future, a study of the relationship of work flow to project planning and completion and the software, equipment and tools used in the industry.
Photo Imaging	30105	Photo Imaging teaches the technical skills need to produce quality images for use in a variety of applications. Topics include use of equipment, software and techniques to take, edit and manipulate digital images.
Essentials of Interior and Textile Design	30110	Essentials of Interior and Textile Design introduces students to and expands upon the various aspects of industry, conveying the commercial application of principles and elements of design, production processes, and maintenance techniques to meet the design needs of humans. This course will also provide a discussion and exploration of career opportunities in interior, textiles, and set/exhibit design.
Trends in Interior and Textile Design	30111	A trend in Interior and Textile Design examines special topics in interiors and apparel that meet the needs of humans now and projected in the future, rather than providing a general study. Topics include sustainable design, shelter/apparel for diverse populations (such as aging, special needs, etc.), and how trends are developed. Additional topics will be generated as trends are identified.
Interior and Textile Merchandising	30112	Interior and Textile Merchandising is a course that centers upon the merchandising of interior and textile products in a variety of settings. Topics include exploring cycles, trends and style as well as the techniques in coordination, promotion, display and sales of interior and textile items. Basic management and entrepreneurship will be introduced as will the relationship of the skills to set and exhibit design.

Video Production	30150	Video Production applies the technical skills learned in Audio Video Production Fundamentals by allowing students to orchestrate projects from setting the objectives to the post-production evaluation. The subject of the presentation may be determined in a number of ways, but must address an authentic need. The complexity of the presentation is not the focus of this course but the experience of the entire process is, including planning the presentation, setting up the studio (if applies), acting as the videographer, and editor to make it fluid and seamless.
Digital Media Design and Production	30151	Digital Media Design and Production will provide students with the opportunity to apply the fundamental techniques learned in the Digital Media Technology course through the production of a multi-media project for public presentation. Topics include developing a production schedule, working as a team, utilizing composition principles, and embedding audio, video or other content in digital formats.
Interior and Textile Design Studio	30160	Interior and Textile Design Studio provides students with the opportunity to expand knowledge and experiences with 4-dimensional design forms as they relate to human needs. Topics will include the language, materials, and processes used to apply the design elements and principles based upon designers, periods, and styles. As students advance and become more adept, the instruction regarding the creative process becomes more refined, and students are encouraged to develop their own design styles to meet the needs of a client. This application course is client driven in the interior, textile or apparel fields.
Applied Business Development	32200	Applied Business Development students will practice skills of planning, organizing, directing and controlling functions of operating a business while assuming the responsibilities and risks involved. Students will develop skills in enterprise development, market analysis and financial preparation. These courses includes classroom activities as well as involving further study of the field and discussion regarding real-world experiences and applications that students encounter in owning and managing a business.
Event Planning and Management	34052	This course provides students with the knowledge and skills related to the event planning and implementation process. It will include establishing client relationships, the importance of communication, planning process, resource management, quality service and staffing issues.
Food Technology and Development	34053	Food Technology and Development explores the basics of food production from a science perspective and how the concepts impact our food supply. This course would focus on the technological advancements in nutrition, food production; value added products and food storage. Topics may include use of chemicals or additives on or in foods, meaning of terms such as “organic” and “all-natural”, and may include students developing and marketing a new food product to meet an identified need.

Foundations of Lodging	34054	This course provides students with an overview of the knowledge and skills related to the business of lodging. It will include an exploration of the many aspects of the industry, basic processes and procedures (i.e. housekeeping, check in procedures) as well as the guest cycle.
Culinary Art - General Skill Specialty	34056	Culinary Art—General Skill Specialty will focus upon the skills generally recognized as important to the field of culinary arts. Topics will include plating, garnishes, soups, sauces and main dish presentation. Bakery and desserts will be introduced, but not the main focus on this course. Catering experiences may be included as well as observations of those already in the field that are responsible for these areas in food production or a culinary kitchen.
Culinary Art - Bakery/Grains Specialty	34057	Culinary Art-Bakery/Grains Specialty will focus upon the instruction and skill development related to bakery items. Topics may include study of grain production, nutrition values and product performance as well as the application to grain products. Baking experiences may include yeast breads, quick breads, cakes (and cake decoration) and other baked desserts, product outcomes using various flours and storage methods. An entrepreneurship experience may be part of this course.
Culinary Art - International specialty	34058	Culinary Art—International Specialty will focus on the skills required when developing an understanding of the diversity and uniqueness of foods across the globe. Topics may range from specific regions of the United States, to the different cultures and food habits around the world. Particular attention will be made to keep the experiences as real as possible using authentic ingredients, procedures and equipment. An entrepreneurship experience may be part of this course.
Baking and Pastry II	34059	This course builds upon the Baking and Pastry I course by refining and expanding skills of production management. Topics also include analyzing the scientific reactions during production and expanding the skill development to address the finer aspects of the field.
Lodging Management	34155	This is the second in a sequence of courses related to the lodging industry that shares more specifics related to working within the business. It will include property management, guest services, hotel/motel registration systems, services and amenities. Other topics may include, but not limited to basic business practices, quality service, staffing issues and current technology
Lodging Management II	34159	This is the third in a sequence of lodging courses that expands the understanding of the industry to include the trends, marketing and an in-depth look at customer service issues (i.e. communication skills, conflict resolution, active listening).

Culinary Applications	34198	This course applies the skills needed in the culinary arts profession. It includes the application of skills within a school-based, community-based experience or work-based internship and will cover an introduction of all aspects of an industry. Students enrolled in this course are expected to have mastered skills in the culinary field so that they are able to apply them in authentic experiences following industry standards and regulations. Local prerequisites apply.
Lodging Management Applications	34200	This course is designed to provide an authentic experience within the lodging industry. Content will include the analysis, observation and demonstration of skills necessary for success. An introduction to all aspects of the industry will be included (i.e. management, financial, front office, housekeeping, food service and guest services).
Health Science II A	36002	This course provides students with an orientation to the health care industry and helps refine their health care-related knowledge and skills. Topics covered include (but are not limited to) an overview of health care delivery; anatomy and physiology; identification of medical equipment and supplies; medical terminology; hygiene and disease prevention.
Health Science II B	36003	This course provides students with an orientation to the health care industry and helps refine their health care-related knowledge and skills. Topics covered include (but are not limited to) patient care, including assessment of vital signs, body mechanics, and diet; first aid and CPR procedures; laboratory procedures; and ethical and legal responsibilities.
Home Health Care	36053	This course will teach students how to care for individuals within their homes. Course content will include patient care, comfort, and safety; anatomy and physiology; the prevention of disease and infection; nutrition and meal preparation; human relations; and first aid and CPR. Additional topics that must be included to receive a full credit are therapy strategies, household management and employability.
Emergency Medical Technology B	36055	This course will place an emphasis on the knowledge and skills needed in medical emergencies. Topics typically include clearing airway obstructions, controlling bleeding, bandaging, methods for lifting and transporting injured persons, simple spinal immobilization, infection control, stabilizing fractures, and responding to cardiac arrest. Content may also cover legal and ethical responsibilities involved in dealing with medical emergencies. To receive a full credit for this course, topics above and beyond those listed above must be integrated into the curriculum.

Pharmacy Assistant	36152	The course content for this course will emphasize the knowledge and skills necessary to assist a pharmacist or pharmacy technician. Course content will enable the student to understand medical terminology, keep and maintain records, label medications, perform computer patient billing, perform stock inventory, and order supplies. To receive a full credit for this course, it must include pharmaceutical classification, drug interactions and interpersonal/communication skills. (This is a 1 credit course.)
Medical Terminology	36154	In this course students will learn how to identify medical terms by analyzing their components. This course will emphasize defining medical prefixes, root words, suffixes, and abbreviations. To receive a full credit for this course a primary focus must be integrated into the course to emphasize the development of both oral and written skills in the language used to communicate within health care professions. (This is a 1 credit course)
Biotechnology B	36252	This course is the study of the bioprocesses of organisms, cells, and/or their components. The course will enable students to use this knowledge to produce or refine products, procedures, and techniques. Course topics include laboratory measurement, monitoring and calculation; growth and reproduction; chemistry and biology of living systems; quantitative problem-solving; data acquisition and display; and ethics. Advanced topics must be included for the 1 credit course biochemistry and genetics.
Special Health Science Topics B	36254	This course will examine particular topics in health science other than those taught in the core sequence of courses. Topics to be included in this course are Pharmacy Technician, Sports Medicine, Phlebotomy, Gerontology, and Veterinary Assistant. To receive a full credit for this course, topics above and beyond those listed above must be integrated into the curriculum.
Health Science III Classroom/Work Experience	36991	This course content will provide students with work experience in the five career pathways. Goals are typically set cooperatively by the student, parents, teachers and employers. The course will include classroom activities involving research of the various careers in the health profession and one rotation within each of the five pathways for the Health Science Education cluster. The rotational clinical/shadowing experience for students may occur at a variety of settings (i.e., dentist office, Therapeutic; occupational therapy, diagnostic; social worker, Health Informatics; interpreter, Support Services; pharmacy, Biotechnology). The work experience may be paid or unpaid.

Health Science IV	36992	Students are required to rotate through a career from each of the five pathways for a Health Science Education cluster. Work experience only is developed to provide a rotational clinical/shadowing experience for the students at a variety of settings (i.e., dentist office, Therapeutic; occupational therapy, diagnostic; social worker, Health Informatics; interpreter, Support Services; pharmacy, Biotechnology). Goals are typically set cooperatively by the student, parents, teacher and employer. The work experience may be paid or unpaid.
Health Science V	36993	Students are required to rotate through a career from each of the five pathways for a Health Science Education cluster. Work experience only is developed to provide a rotational clinical/shadowing experience for the students at a variety of settings (i.e., dentist office, Therapeutic; occupational therapy, diagnostic; social worker, Health Informatics; interpreter, Support Services; pharmacy, Biotechnology). Goals are typically set cooperatively by the student, parents, teacher and employer. The work experience may be paid or unpaid. Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare.
Health Science VI (Classroom and Work Experience)	36994	This course provides an opportunity for students to participate in both the classroom and in one or more work experience rotations in each of the five pathways of the Health Science Education career cluster. During rotation opportunities, students will gain knowledge and skills required of all aspects of the healthcare profession. Students must complete at least five (5) rotations during the semester that encompass occupations representing Diagnostic Services, Therapeutic Services, Health Informatics, Support Services and Biotechnology. Teaching and learning experiences to be included but not limited to are portfolio development, documentation of daily shadowing experiences, appropriate communication skills, and proper application of HIPPA rules and regulations. Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare.

Health Science VII	36995	This course provides an opportunity for students to participate in both the classroom and in two or more work experience rotations in each of the five pathways of the Health Science Education career cluster. During rotation opportunities, students will gain knowledge and skills required of all aspects of the healthcare profession. Students must complete at least five (5) rotations during the year that encompass occupations representing Diagnostic Services, Therapeutic Services, Health Informatics, Support Services and Biotechnology. Teaching and learning experiences to be included but not limited to are portfolio development, documentation of daily shadowing experiences, appropriate communication skills, and proper application of HIPPA rules and regulations. Additional course content may include but is not limited to leadership skills and research of personal career interests in healthcare. Students enrolled in this course will be required to complete additional two-week rotations in specialized health science pathways leading to an industry recognized certification (EMT, CNA, Pharmacy Tech, Phlebotomy, etc.).
Introduction to Industrial Technology	38001	An introductory Level course designed to instruct students in the basic skills necessary to all occupations in the Construction, Manufacturing and Transportation areas.
Residential Carpentry II	38002	An advanced comprehensive course designed to instruct students in skills pertaining to rough construction and finish work.
Cabinet & Furniture Design II	38007	An advanced level application course designed to provide students with experience in constructing cases, cabinets, counters, furniture and interior woodwork.
Advanced Materials Technology	38010	A progressive application level course furthering the study of CNC equipment, composite panel products, and veneering, and the processes involved with fabricating goods with these technologies.
Sheet Metal and HVACR	38012	A comprehensive, application level course that provides training in the theories, equipment, and skills necessary to perform sheet metal procedures, and to install and maintain HVAC and Refrigeration systems.
Commercial Construction Careers II	38015	An advanced level application course designed to instruct students in the design and management areas of commercial construction.
Advanced Studies	38050	This is an advanced level application course covering specific research-based topics in architectural design.
Commercial and Industrial Interior Design	38212	An application level course designed to instruct students in the skills necessary to design interior spaces that acknowledge client needs, legislated codes, historic, current and future trends, and public policy for commercial and industrial buildings (e.g. office buildings, warehouses and manufacturing sites, etc.).
Automated Systems	39010	Provides students with the knowledge and skills needed to program and operate robotic equipment in manufacturing occupations.

Mass Production II	39052	An application level course designed to instruct students in the knowledge and skills required for fabricating products using a variety of materials (wood, plastic, metal, composites).
Advanced Production Blueprint Reading	39108	Provides students with the knowledge and skills to interpret the variety of drawings used in production occupations including multi-view drawings, computer models and dimensioning.
Maintenance Blueprint Reading	39109	Provides students with the knowledge and skills to interpret the variety of drawings used in maintenance occupations including: blueprints, schematics, flow diagrams, and other trade prints.
Machine Tool Technology 1a	39203	A comprehensive course designed to instruct students in the basic theories, equipment and skills needed to perform machining activities.
Machine Tool Technology II	39204	An application level course designed to provide students with advanced machining skills and further opportunities to apply those skills.
Production Welding Processes I	39207	A comprehensive course designed to provide students with knowledge and skills in basic welding theories and terminology, to perform Oxy-fuel and Arc Welding activities in the F & H positions, and to perform Non-destructive testing activities.
Production Welding Processes II	39208	An application level course designed to instruct students in the knowledge and skills needed for solving fabrication problems, to weld joints in the V & OH positions, and perform Plasma cutting.
Hydraulics & Pneumatics	39302	Provides students with advanced knowledge and skills in operating, maintaining and troubleshooting hydraulic & pneumatic systems.
Automotive Information	40050	Provides students with the opportunity to learn practical car maintenance skills. They will attain basic skills and knowledge needed to own and maintain a vehicle. The students will learn what to consider when buying a car, shopping for car insurance, acquiring a title, etc.
Introduction to Transportation	40100	This course gives students an overview of transportation industry skills and career opportunities, as well as the education required to acquire each career.
General Service I	40150	A technical level course designed to provide students with basic theories and information needed to develop an understanding of automotive and light truck vehicles.
General Service II	40152	A Comprehensive, application level course designed to provide students with knowledge in the theory of operation, the equipment and the skills necessary for employment in the field of automotive and light truck service.
General Service III	40154	An advanced, comprehensive, application level course designed to build upon skills in the General Service II course and to provide additional opportunities for work-based experience.
Fundamentals of Electronic/Electrical Systems	40200	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service electrical systems.

Advanced Electronic/Electrical Systems	40202	A comprehensive, application level course designed to provide students with the basic skills needed to inspect, service and repair electrical circuits and devices.
Brakes	40204	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service braking systems.
Advanced Brakes	40206	A comprehensive, application level course designed to provide students with the basic skills needed to inspect, service and repair braking systems to industry standards.
Drive Train Technology	40208	A comprehensive, technical level course designed to provide students with the basic theories and skills needed to inspect and service drive train components.
Alternative Power	40210	A technical level course designed to provide students with basic theories and information needed to develop an understanding of alternative power used in transportation.
Small Gas Engines & Powertrains	40212	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to all small engine operations and repair.
Advanced Small Engines & Powertrains	40214	A comprehensive, application level course designed to provide students with advanced knowledge and skills common to all small engine operations and repair.
Engine mechanical Repair-Gas &/or Diesel	40216	A comprehensive technical level covers the tools, skills, and techniques required to perform base engine mechanical repair and testing. This includes engine removal, installation, and maintenance.
Engine Performance I	40220	A comprehensive, technical level course designed to provide students with the basic skills needed to inspect, understand and diagnose engine control systems.
Engine Performance II	40222	A comprehensive, application level course designed to provide students with the skills needed to inspect, service and repair engine control systems.
Steering & Suspension	40224	A comprehensive, technical level course designed to provide students with the basic theories, equipment, and skills needed to inspect and service steering and suspension systems.
Advanced Steering/Suspension	40226	A comprehensive, application level course designed to provide students with the advanced skills needed to inspect, service and repair steering and suspension systems.
Mobile HVAC	40228	A comprehensive technical level course designed to provide students with the basic and advanced theory of operation, service and repair of the air-conditioning, heating and vehicle cooling system as it relates to the mobile climate control system.
Research & Emerging Trends in Transportation	40250	An advanced research and application course covering specific topics in transportation. Should include opportunities for IHT, OJT and/ or Internships.

Research & Emerging Trends in Transportation	40251	An advanced research and application course covering specific topics in transportation. The course should include opportunities for IHT, OJT and/ or Internships. In relationship to the half credit version, the full credit version requires more in-depth research opportunities, the creation of a portfolio documentation of internship activities and the completion of the OSHA 10 Safety Certification course.
Auto Collision I	40300	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to the Collision Industry.
Auto collision II	40302	A comprehensive, application level course designed to provide students with the advanced skills needed to perform diagnosis and repair in the Collision Industry.
Auto Refinishing I	40310	A comprehensive, technical level course designed to instruct students in the knowledge and skills common to the Auto Refinishing Industry.
Auto Refinishing II	40312	A comprehensive, application level course designed to provide students with the skills needed to perform diagnosis and repair in the Refinishing Industry.
Custom Refinishing & Applications A	40314	A comprehensive, application level course designed to provide students with the skills needed to perform diagnosis and repair in the Custom Refinishing Industry.
Custom Refinishing & Applications B	40315	An advanced application level course offering students further opportunities for creative applications in custom refinishing.
Technical Level Introduction to Computer Science	41010	Students create interactive stories in Scratch™ (an easy-to-use programming language); work in teams to create simple apps for mobile devices using App Inventor; and analyze data about students' health, social habits, and interests using functions in Excel®. Students will learn the impact of computing in society and the application of computing across career paths. They will also transfer the understanding of programming gained in App Inventor to a third language, Python®, in which they learn introductory elements of text-based programming.
Computer Science and Software Engineering	41011	Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science, although we encourage students without prior computing experience to start with Technical Level Introduction to Computer Science. This course helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, robotics, and simulation.
Computer Science Application (CSA)	41020	CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools.

Simulation and Modeling (SAM)	41030	In (SAM), students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.
Artificial Intelligence (AI)	41034	AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.
Cybersecurity (SEC)	41036	This course introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in this course, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.
Computational Problem Solving (CPS)	41037	Computational Problem Solving offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.
Intro to Government and Public Administration	43001	This course will introduce students to the knowledge and skills of serving the general public in a variety of occupations. Topics will include identifying personal strengths and weaknesses and setting career goals, leadership, teamwork and problem solving, analyzing leadership roles and identifying leadership opportunities within the school.
Government and Public Administration Fundamentals	43105	This course will look at meeting the needs of the U.S. culture through positions within Government and Public Administration. Topics will include the role of government in providing services for the US population, the impact of the US on other nations as well as the impact of other nations on the US, and the professional traits required of those in this field. In addition, it will look at the problem solving and critical thinking processes, and leadership and teamwork practices.

Media and Public Relations	43115	This course will build skills needed to communicate messages to the public as it relates to topics of concern. Topics will include conflict awareness, reliability of sources, creating publicity materials, public relations campaigns and working with media.
Governance Applications	43250	This course applies the skills needed in government and public administration professions. It includes the application of leadership and teamwork within the classroom or as an intern at a work location. Topics may include working with budgets, negotiation/communication with co-workers, developing proposals, making oral presentations and making informed decisions to meet an identified need.
Intro to LPSS	44001	An introductory course designed to provide students with knowledge of occupations available in the Law, Public Safety and Security fields and introduce them to the legal system, professional conduct, safety, and types of crime.
History of Emergency Medical Services	44005	An introductory level course designed to provide students with knowledge of the history of modern emergency medical services in the United States and how those services have progressed and changed over time.
IT in Service Professions	44010	A technical level course designed to provide students with the knowledge needed to perform the written and other communication duties associated with careers in LPSS.
First Aid/CPR/EMR	44050	A technical level course designed to instruct students in the requirements and skills to obtain national certifications for First Aid, CPR and Emergency Medical Responder.
EMT-Bridge	44055	A technical level course designed to provide students with basic knowledge and skills needed to pursue postsecondary training the Emergency Medical field (ie., EMT, Paramedic).
EMT	44060	A technical level course designed to provide skills and knowledge necessary to sit for the EMT certification test. Course is taught by a certified EMT instructor and follows competencies set forth by the certifying agency.
Fire Science I	44100	The first of two courses designed to provide students with the knowledge and skills to obtain a Fire Fighter I national certification.
Fire Science II	44101	The second of two courses designed to provide students with the knowledge and skills to obtain a Fire Fighter I national certification.
Law Enforcement I	44200	The first of two courses designed to provide students with the skills and knowledge necessary to obtain entrance to the Law Enforcement or Highway patrol Academy.
Law Enforcement II	44201	The second of two courses designed to provide students with the skills and knowledge necessary to obtain entrance to the Law Enforcement or Highway Patrol Academy.
Certified Protection Officer	44210	An application level course designed to provide students with the skills and knowledge needed to obtain national certification as a CPO (Security Guard).

Corrections Officer	44215	An application level course designed to provide students with the skills and knowledge needed to obtain entry-level employment as a corrections officer in the local, state and/or federal detention system.
Practical Law	44300	This course will study the basic legal principles common to a broad base of everyday business activities and will provide practical law information necessary to develop problem-solving skills in our legal society. Topics include, but are not limited to, criminal law, juvenile law, torts, family law, discrimination, writing a brief and employee rights.
Foundations in Law	44305	This course helps students understand why we live under the rule of law, and how laws are created, enforced, interpreted, and changed. The course enables students to examine diverse areas of law, including criminal, civil, constitutional, and international. It also explores civil rights issues and the role of advocacy, civics, and the media in our legal system.
Youth Court	44310	This is an application course in which students will demonstrate technical skills related to careers in the legal and judicial field, and analyze the impact of legal and judicial careers on community
Introduction to Family and Consumer Science	45001	Introduction to Human Services B offers a look into the many occupations (paid and unpaid) linked to providing for the basic needs of children, individuals and families. Occupations will include nutrition educator, child care provider, social worker, foster parent, credit counselor, geriatric care provider, senior citizen care director, food service provider, restaurant manager, culinary artists, interior/textile designer, event planner and family and consumer sciences teacher.
Human Growth and Development A	45004	Human Growth and Development A provide students with knowledge about the physical, mental, emotional, and social growth and development of humans from conception to old age, with a special emphasis on birth through school age. Course content will provide an overview of life stages, with a strong tie to prenatal and birth processes; fundamentals of children's emotional and physical development; and the appropriate care of children.
Human Growth and Development B	45014	Human Growth and Development B provide students with knowledge about the physical, mental, emotional, and social growth and development of humans from conception to old age and information on the occupations associated with meeting the needs of people. In addition, this course helps students discover how individuals respond to the various stages of the life span, with a strong tie to teen years, adulthood and later years.