



# Texas Advanced Technical Credit Statewide Articulated Course Crosswalk

## Effective School Year 2017–2018

Revised September 12, 2017

To indicate statewide-articulated courses on a student’s AAR, use special course explanation code “A”.

Courses in an articulated coherent sequence of at least two courses may be taken at any grade level (9–12) as long as the final course in the articulated coherent sequence is taken in Grade 11 or 12.

- Courses taken in the eighth (8th) grade will not be eligible for Advanced Technical Credit.
- Students must score 80% or above in each articulated credit course.
- All high school courses must include enhanced content equivalent to the college courses indicated, and are a minimum of one (1) high school credit unless otherwise noted.
- To fulfill SACS requirements, instructors eligible to teach ATC courses must hold a bachelor degree in the teaching discipline, or a minimum of an associate degree and demonstrated competencies (operationalized as at least 3 years relevant and verifiable work experience and certifications if applicable) directly related to the teaching discipline. Other course-specific requirements may be noted in the Crosswalk.

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## Agriculture, Food and Natural Resources

High School Course	College WECM Equivalent
<p><b>Livestock Production</b> 1 credit LIVEPROD • 13000300</p> <p><b>OR</b></p> <p><b>Livestock Production/ Agricultural Laboratory and Field Experience</b> 2 credits LIVPROLAB • 13000310</p> <p><b>Course Description:</b> Students will acquire knowledge and skills related to livestock and the livestock production industry. Livestock Production may address topics related to beef cattle, dairy cattle, swine, sheep, goats, and poultry. To prepare for careers in the field of animal science, students must attain academic skills and knowledge, acquire knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p>	<p><b>Animal Science</b> AGAH 1301 or AGAH 1401</p> <p><b>Course Description:</b> An introductory survey of the scientific principles and applied practices related to livestock production. Topics include genetics, animal breeding and selection, anatomy and physiology, nutrition, reproduction, health, and marketing of livestock and livestock products.</p> <p><b>End-of-Course Outcomes:</b> Summarize the importance of animal agriculture to society; identify livestock species, breeds, and classes and their utilization within the livestock industry; and differentiate various livestock products and identify their contribution to the world food supply.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Animal Health</b> AGAH 1343</p> <p><b>Course Description:</b> An overview of anatomy and physiology as it relates to animal health. Topics include disease symptoms, basic immunology, diagnosis, prevention, and control of infectious and non-infectious diseases of animals.</p> <p><b>End-of-Course Outcomes:</b> Summarize the importance of livestock diseases and animal health; diagnose symptoms and identify causes of various animal diseases; and implement preventative and treatment methods for various animal diseases.</p>
<p><b>Equine Science</b> 0.5 credit EQUINSCI • 13000500</p> <p><b>Course Description:</b> Students will acquire knowledge and skills related to equine animal systems and the equine industry. Equine Science may address topics related to horses, donkeys, and mules. To prepare for careers in the field of animal science, students must enhance academic knowledge and skills, acquire knowledge and skills related to animal systems, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p>	<p><b>Equine Science I</b> AGEQ 1311</p> <p><b>Course Description:</b> An introduction to the horse industry. Includes history, organization and operation of equine enterprises, selection, breeds, breeding, reproduction, health, nutrition, management, and marketing.</p> <p><b>End-of-Course Outcomes:</b> Explain the historical significance of the horse to society; identify horse breeds; identify basic anatomy and physiological functions; and outline managerial practices relevant to the horse industry.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Horse Evaluation I</b> AGEQ 1315</p> <p><b>Course Description:</b> Instruction in evaluation and selection of horses based on breed/performance criteria. Topics include basic anatomy and its relation to function, breed type and characteristics, and standard performance classes.</p>

High School Course	College WECM Equivalent
	<p><b>End-of-Course Outcomes:</b> Relate conformation to equine functions; prioritize and utilize criteria as related to evaluation and selection; and employ appropriate terminology used in discussing evaluation and selection processes.</p>
<p><b>Veterinary Medical Applications</b> 1 credit VETMEDAP • 13000600</p> <p><b>OR</b></p> <p><b>Veterinary Medical Applications/ Agricultural Laboratory and Field Experience</b> 2 credits VETMEDLAB • 13000610</p> <p><b>Course Description:</b> This course covers topics relating to veterinary practices, including practices for large and small animal species. To prepare for careers in the field of animal science, students must attain academic skills and knowledge, acquire technical knowledge and skills related to animal systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings.</p> <p><b>Instructor Requirement:</b> Teacher must have Veterinary Technician Certificate.</p>	<p><b>Veterinary Medical Terminology</b> VTHT 1105 or VTHT 1205</p> <p><b>Course Description:</b> Introduction to word parts, directional terminology, and analysis of veterinary terms.</p> <p><b>End-of-Course Outcomes:</b> Define and use veterinary terms.</p>
<p><b>Agribusiness Management and Marketing</b> 1 credit AGRBUSMM • 13000900</p> <p><b>OR</b></p> <p><b>Agribusiness Management and Marketing/ Agricultural Laboratory and Field Experience</b> 2 credits AGRBUSLAB • 13000910</p> <p><b>Course Description:</b> This course is designed to provide a foundation to agribusiness management and the free enterprise system. Instruction includes the use of economic principles such as supply and demand, budgeting, record keeping, finance, risk management, business law, marketing, and careers in agribusiness. To prepare for careers in agribusiness systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to agribusiness marketing and management and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p>	<p><b>Introduction to Agribusiness</b> AGMG 1311</p> <p><b>Course Description:</b> Introduction to agribusiness management, marketing, and sales in the free enterprise system. Topics include economic principles, finance, risk management, record keeping, budgeting, employee/employer responsibilities, communications, human relation skills, and agricultural career opportunities.</p> <p><b>End-of-Course Outcomes:</b> Discuss agricultural trade, consumption, and employment as it pertains to the complex field of agriculture; and apply basic economic principles and management functions to agribusiness.</p>

High School Course	College WECM Equivalent
<p><b>Oil and Gas Production I</b> 1 credit <b>OILGP1 • 13001250</b></p> <p><b>OR</b></p> <p><b>Oil and Gas Production I/ Agricultural Laboratory and Field Experience</b> 2 credits <b>OILGPLAB1 • 13001255</b></p> <p><b>Course Description:</b> Students will identify specific career opportunities and skills, abilities, tools, certification, and safety measures associated with each career. Students will also understand components, systems, equipment, and production and safety regulations associated with oil and gas wells. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate proper use of consistent units in scientific formula calculations.</li> <li>• Demonstrate competency reading graphs, tables, diagrams, and flow charts.</li> </ul>	<p><b>Recovery and Production Methods</b> <b>PTRT 1307 or PTRT 1407</b></p> <p><b>Course Description:</b> Petroleum recovery and production methods.</p> <p><b>End-of-Course Outcomes:</b> Describe natural reservoir drive mechanisms, and artificial lift methods; identify the components of surface systems, identify factors used to select and describe basic life and recovery methods.</p>
<p><b>Wildlife, Fisheries, and Ecology Management</b> 1 credit <b>WFECGT • 13001500</b></p> <p><b>OR</b></p> <p><b>Wildlife, Fisheries, and Ecology Management/ Agricultural Laboratory and Field Experience</b> 2 credits <b>WFECGTLAB • 13001510</b></p> <p><b>Course Description:</b> This course examines the management of game and non-game wildlife species, fish, and aquacrops and their ecological needs as related to current agricultural practices. To prepare for careers in natural resource systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p>	<p><b>Introduction to Wildlife Management</b> <b>WMGT 1305</b></p> <p><b>Course Description:</b> History of wildlife management based on its economic and ecological impact. Includes basic wildlife and habitat management techniques and discussion of threatened and endangered species.</p> <p><b>End-of-Course Outcomes:</b> Employ basic wildlife management practices involving particular species in select environments; explain the impact of various management practices on desirable wildlife; identify desirable plant species required by specific wildlife species; and explain the biological and economic impact of wildlife.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Wildlife Conservation and Management</b> <b>WMGT 1323</b></p> <p><b>Course Description:</b> Study of the principles and practices used in the production and improvement of North American wildlife resources.</p>

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	<p><b>End-of-Course Outcomes:</b> Summarize the importance of and develop an appreciation for wildlife resources; recognize the necessity of conservation efforts designed to improve and maintain wildlife resources for future generations; identify and implement managerial practices designed to improve wildlife habitats and populations; and develop an understanding of and appreciation for the role of sport hunting as it relates to the conservation of wildlife in a modern society.</p>
<p><b>Range Ecology and Management</b> 1 credit RECOMGT • 13001600</p> <p><b>OR</b></p> <p><b>Range Ecology and Management/ Agricultural Laboratory and Field Experience</b> 2 credits RECOMGLAB • 13001610</p> <p><b>Course Description:</b> This course is designed to develop students' understanding of rangeland ecosystems and sustainable forage production. To prepare for careers in environmental and natural resource systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to environmental and natural resources, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Devise range reseeding and water development.</li> <li>• Design rotational grazing systems.</li> </ul>	<p><b>Range Management</b> AGCR 1307 or AGCR 1407</p> <p><b>Course Description:</b> Practical problems of managing native pastures and rangelands. Includes rangeland ecology, stocking rates, rotation systems, toxic plants, range reseeding, brush control, and ecological and physiological responses of range vegetation to grazing.</p> <p><b>End-of-Course Outcomes:</b> Identify range problems including toxic plants, overgrazing, and water distribution; evaluate brush control methods including biological, mechanical, chemical, and range burning; devise range reseeding and water development plans; design rotational grazing systems; and compute stocking rates.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Crop Science</b> AGRC 1403</p> <p><b>Course Description:</b> Fundamentals of the development, production, and management of field crops. Topics include the classification and distribution of field crops, botany, soils, plant breeding, pest management, and harvesting.</p> <p><b>End-of-Course Outcomes:</b> Classify field crops according to morphology, use, and distribution; relate basic plant biology to crop production; and describe basic crop production factors including soils, fertilizers, pest management, tillage practices, crop rotations, and harvesting.</p>
<p><b>Landscape Design and Management</b> 0.5 credit LNDMGT • 13001900</p> <p><b>Course Description:</b> This course is designed to develop an understanding of landscape design and management techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.</p>	<p><b>Landscape Design</b> HALT 1322 or HALT 1422</p> <p><b>Course Description:</b> A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate procedures utilized in the development of a landscape plan; develop a landscape design; and perform a site analysis and incorporate the information into the final design.</p> <p style="text-align: center;"><b>OR</b></p>

High School Course	College WECM Equivalent
<p><b>AND</b></p> <p><b>Turf Grass Management</b>  <b>0.5 credit</b>  <b>TGMGT • 13001950</b></p> <p><b>Course Description:</b> This course is designed to develop an understanding of turf grass management techniques and practices. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticultural systems and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.</p>	<p><b>Turfgrass Science and Management</b>  <b>HALT 1324 or HALT 1424</b></p> <p><b>Course Description:</b> Coverage of various species of warm and cool season grasses including their uses, applications, adaptability, environmental tolerances, anatomy, and physiological responses.</p> <p><b>End-of-Course Outcomes:</b> Discuss turfgrass quality, selection, and adaptation; describe cultural practices of major cool and warm season turfgrasses; examine turfgrass responses to different environmental conditions; and identify cultural practices.</p>
<p><b>Horticultural Science</b>  <b>1 credit</b>  <b>HORTISCI • 13002000</b></p> <p><b>OR</b></p> <p><b>Horticultural Science/  Agricultural Laboratory and Field Experience</b>  <b>2 credits</b>  <b>HORSCILAB • 13002010</b></p> <p><b>Course Description:</b> This course is designed to develop an understanding of common horticultural management practices as they relate to food and ornamental plant production. To prepare for careers in horticultural systems, students must attain academic skills and knowledge, acquire technical knowledge and skills related to horticulture and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills in a variety of settings.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Explain the effect of environmental factors on plant growth.</li> </ul>	<p><b>Principles of Horticulture</b>  <b>HALT 1301 or HALT 1401</b></p> <p><b>Course Description:</b> An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.</p> <p><b>End-of-Course Outcomes:</b> Utilize scientific nomenclature used in horticulture; explain the effect of environmental factors on plant growth; and identify the various facets of the horticulture industry and career opportunities.</p>
<p><b>Agricultural Mechanics and Metal Technology</b>  <b>1 credit</b>  <b>AGMECHMT • 13002200</b></p> <p><b>OR</b></p> <p><b>Agricultural Mechanics and Metal Technology/  Agricultural Laboratory and Field Experience</b>  <b>2 credits</b>  <b>AGMECMTLAB • 13002210</b></p>	<p><b>Shop Safety and Procedures</b>  <b>DEMR 1301 or DEMR 1401</b></p> <p><b>Course Description:</b> A study of shop safety, rules, basic shop tools, and test equipment.</p> <p><b>End-of-Course Outcomes:</b> Identify and use basic hand tools; use human protection equipment; and correctly use and dispose of hazardous materials.</p>

High School Course	College WECM Equivalent
<p><b>Course Description:</b> This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer knowledge and skills and technologies in a variety of settings.</p>	<p style="text-align: center;"><b>OR</b></p> <p><b>Farm and Ranch Shop Skills I</b> <b>AGME 1315 or AGME 1415</b></p> <p><b>Course Description:</b> Study and application of shop skills used in agricultural processes including arc welding, oxyacetylene cutting and welding, drawing and planning projects, tool maintenance, metal working, woodworking, plumbing, and concrete.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate oxyacetylene cutting procedures; demonstrate arc welding; identify shop tools; utilize shop plans; and describe construction processes.</p>
<p><b>Agricultural Power Systems</b> <b>2 credits</b> <b>AGPOWSYS • 13002400</b></p> <p><b>OR</b></p> <p><b>Agricultural Power Systems/ Agricultural Laboratory and Field Experience</b> <b>3 credits</b> <b>AGPOWSLAB • 13002410</b></p> <p><b>Course Description:</b> This course is designed to develop an understanding of power and control systems as related to energy sources, small and large power systems, and agricultural machinery. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the workplace; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and technical skills in a variety of settings.</p>	<p><b>Preventative Maintenance</b> <b>DEMR 1229 or DEMR 1329</b></p> <p><b>Course Description:</b> An introductory course designed to provide the student with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.</p> <p><b>End-of-Course Outcomes:</b> Apply preventative maintenance practices; perform preventative maintenance on systems; and practice appropriate record keeping.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Small Gasoline Engine</b> <b>SMER 1424</b></p> <p><b>Course Description:</b> An in-depth study of chain saw engines. Repair and operational safety will be emphasized.</p> <p><b>End-of-Course Outcomes:</b> Describe ignition systems theory testing and diagnosis; disassemble, repair, inspect, and service engines; demonstrate the use and care of tools and materials; and demonstrate safe operations.</p>

## Architecture and Construction

High School Course	College WECM Equivalent
<p><b>Interior Design I</b>  <b>1 credit</b>  <b>INTERDS1 • 13004300</b></p> <p><b>Course Description:</b> This course is a technical course that addresses psychological, physiological, and sociological needs of individuals by enhancing the environments in which they live and work. Students will use knowledge and skills related to interior and exterior environments, construction, and furnishings to make wise consumer decisions, increase productivity, promote sustainability, and compete in industry.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Discuss the scope of interior design profession.</li> </ul> <p><b>Required Prerequisites:</b>                      Algebra I and English I</p>	<p><b>Fundamentals of Interior Design</b>  <b>INDS 1311 or INDS 1411</b></p> <p><b>Course Description:</b> An introduction to the elements and principles of design, the interior design profession, and the interior design problem-solving process.</p> <p><b>End-of-Course Outcomes:</b> Describe and apply elements and principles of design; discuss the scope of the interior design profession; describe the interior design problem-solving process; and identify design quality.</p>
<p><b>Architectural Design I</b>  <b>1 credit</b>  <b>ARCHDSN1 • 13004600</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter a career in architecture or construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, or landscape architecture. Architectural Design I includes the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for nonresidential or residential architectural purposes.</p> <p><b>Required Prerequisites:</b>                      Algebra I and English I</p>	<p><b>Architectural Drafting – Residential</b>  <b>DFTG 1317 or DFTG 1417</b></p> <p><b>Course Description:</b> Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods.</p> <p><b>End-of-Course Outcomes:</b> Utilize architectural terms, symbols, residential construction materials, and processes to produce a set of residential construction drawings including site plan, floor plan, elevations, wall sections, schedules, details, and foundation plan using reference materials.</p>
<p><b>Architectural Design II</b>  <b>2 credits</b>  <b>ARCHDSN2 • 13004700</b></p> <p><b>Course Description:</b> Students will gain advanced knowledge and skills needed to enter a career in architecture or construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, or landscape architecture. Architectural Design II includes the advanced knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for nonresidential or residential architectural purposes.</p>	<p><b>Architectural Drafting – Commercial</b>  <b>DFTG 2328 or DFTG 2428</b></p> <p><b>Course Description:</b> Architectural drafting procedures, practices, governing codes, terms and symbols, including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods.</p> <p><b>End-of-Course Outcomes:</b> Apply commercial construction materials and processes; produce a set of commercial construction drawings including a site plan, floor plans, reflected ceiling plan, sections, elevations, schedules, and details.</p>

High School Course	College WECM Equivalent
<p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Architectural Design</li> </ul> <p><b>Required Prerequisites:</b> Geometry and either Architectural Design I or Advanced Interior Design</p>	
<p><b>Construction Management I</b> <b>2 credits</b> <b>CONSMGT1 • 13004900</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management I includes the knowledge of design techniques and tools related to the management of architectural and engineering projects.</p>	<p><b>Introduction to the Construction Industry</b> <b>CNBT 1201 or CNBT 1301</b></p> <p><b>Course Description:</b> Overview of the construction industry.</p> <p><b>End-of-Course Outcomes:</b> Identify types of construction and organizational structures; explain purposes for various construction documents; describe the responsibilities of the construction office and field operations; identify environmental health and safety agency requirements; identify the various construction crafts and trades; and describe green and sustainable building practices and standards.</p>
<p><b>Construction Management II</b> <b>2 credits</b> <b>CONSMGT2 • 13005000</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. Construction Management II includes knowledge of the design, techniques, and tools related to the management of architectural and engineering projects.</p> <p><b>Required Prerequisite:</b> Construction Management I</p>	<p><b>Construction Management I</b> <b>CNBT 2342 or CNBT 2442</b></p> <p><b>Course Description:</b> Management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.</p> <p><b>End-of-Course Outcomes:</b> Define terms associated with construction supervision, leadership, motivation, problem solving, and decision making. Demonstrate problem solving and decision making skills in construction problems. Apply green and sustainable building codes and standards. Demonstrate techniques for successful contractor interaction including professional protocol and communication.</p>
<p><b>Construction Technology I</b> <b>2 credits</b> <b>CONTECH1 • 13005100</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter the workforce as carpenters or building maintenance supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in safety, tool usage, building materials, codes, and framing.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>Scale prints with architectural and engineering scales.</li> <li>Interpret a set of construction contract documents.</li> </ul>	<p><b>Architectural Blueprint Reading</b> <b>DFTG 1215 or DFTG 1315</b></p> <p><b>Course Description:</b> The fundamentals of blueprint reading for the construction industry.</p> <p><b>End-of-Course Outcomes:</b> Identify the importance and use of construction prints; identify the symbols, terminology, and standard abbreviations; explain the sequence of drawing organization; make the calculations and measurements relative to construction; and interpret construction drawings and scales.</p> <p style="text-align: center;"><b>OR</b></p>

High School Course	College WECM Equivalent
	<p><b>Residential and Light Commercial Blueprint Reading</b>  <b>CNBT 1300 or CNBT 1400</b></p> <p><b>Course Description:</b> Introductory blueprint reading for residential and light commercial construction.</p> <p><b>End-of-Course Outcomes:</b> Scale prints with architectural and engineering scales; identify construction blueprint symbols and abbreviations; interpret a set of construction contract documents; and correlate elevations, sections, details, plan views, schedules, and general notes.</p>
<p><b>Construction Technology II</b>  <b>2 credits</b>  <b>CONTECH2 • 13005200</b></p> <p><b>Course Description:</b> Students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians, or supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate safety practices and procedures.</li> <li>• Demonstrate methods and techniques used in various types of site preparation and foundations.</li> </ul> <p><b>Required Prerequisite:</b>  Construction Technology I</p>	<p><b>Construction Technology I</b>  <b>CNBT 1316 or CNBT 1416</b></p> <p><b>Course Description:</b> Introduction to site preparation foundations, form work, safety, tools, and equipment.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate safety practices and procedures; use tools and equipment; estimate material requirements from blueprints; and demonstrate methods and techniques used in various types of site preparation and foundations.</p>
<p><b>Mill and Cabinetmaking Technology</b>  <b>2 credits</b>  <b>MACTECH • 13005300</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter the workforce in the area of mill work and cabinet manufacturing and installation. Students may also apply these skills to professions in carpentry or building maintenance supervision or use the skills as a foundation for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in cabinet design, tool usage, jointing methods, finishes, and industry-level practices such as numerical and computer-control production methods.</p>	<p><b>Cabinet Making I</b>  <b>WDWK 1313 or WDWK 1413</b></p> <p><b>Course Description:</b> Design and construction of base cabinets and wall cabinets for kitchens and bathrooms. Emphasis on the safe use of portable and stationary power tools.</p> <p><b>End-of-Course Outcomes:</b> Identify types and components of a cabinet; label types of joints used in cabinet construction; name the standard sizes of the typical kitchen cabinets; label types of cabinet doors; identify hardware used on cabinets; list the types of materials used on cabinets and counter tops; draw plans; calculate costs; and prepare a bill of materials; demonstrate safe use of hand, portable, and stationary power tools; and lay out, cut, and assemble components using proper joints and fastening devices to construct a cabinet.</p>

High School Course	College WECM Equivalent
<p><b>Electrical Technology II</b>  <b>2 credits</b>  <b>ELECTEC2 • 13005700</b></p> <p><b>Course Description:</b> Students will gain advanced knowledge and skills needed to enter the workforce as an electrician, a building maintenance technician, or a supervisor; prepare for a postsecondary degree in a specified field of construction or construction management; or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.</p> <p><b>Required Prerequisite:</b>  Electrical Technology I</p>	<p><b>Fundamentals of Electricity I</b>  <b>ELPT 1319 or ELPT 1419</b></p> <p><b>Course Description:</b> An introduction to basic direct current (DC) theory including electron theory and direct current applications.</p> <p><b>End-of-Course Outcomes:</b> Explain atomic structure and basic electrical values such as voltage, current, resistance, and power; calculate electrical values for series, parallel, and combination circuits; calculate voltage drop based on conductor length, type of material, and size; summarize the principles of magnetism; and utilize electrical measuring instruments.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Basic Electrical Theory</b>  <b>ELPT 1311 or ELPT 1411</b></p> <p><b>Course Description:</b> Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.</p> <p><b>End-of-Course Outcomes:</b> Explain atomic structure and basic values such as voltage, current, resistance, and power; determine electrical values for combination circuits in direct current (DC) and alternating current (AC) containing resistance, inductance, and capacitance; summarize the principles of magnetism; calculate voltage drop based on conductor length, type of material, and size; and utilize electrical measuring instruments.</p>
<p><b>Plumbing Technology I</b>  <b>1 credit</b>  <b>PLTECH1 • 13006000</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills needed to enter the industry as a plumbing apprentice, building maintenance technician, or supervisor or prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in industry workplace basics and employer/customer expectations, including how to use a plumbing code book; how to identify and use power and hand tools; how to be safe on the jobsite and when using hand and power tools; how to apply basic plumbing mathematics and plumbing drawing; and how to identify, fit, and use plastic, copper, cast iron, carbon steel, and corrugated stainless steel pipe. In addition, students will be introduced to gas, drainage, and water supply systems and continue their knowledge of workplace basics and green technologies.</p>	<p><b>Introduction to the Plumbing Trade</b>  <b>PFPB 1413</b></p> <p><b>Course Description:</b> Material selection, mathematical calculations applicable to the plumbing trade, hand and power tools, and safety practices.</p> <p><b>End-of-Course Outcomes:</b> Apply mathematical calculations related to plumbing installation; demonstrate the safe use of hand and power tools; and identify materials used in the plumbing industry.</p>

## Arts, Audiovisual Technology and Communications

High School Course	College WECM Equivalent
<p><b>Animation I</b> 1 credit ANIMAT • 13008300</p> <p><b>OR</b></p> <p><b>Animation I/Animation I Lab</b> 2 credits ANILAB1 • 13008310</p> <p><b>Course Description:</b> Careers in animation span all aspects of motion graphics. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.</p>	<p><b>Interactive Digital Media I</b> IMED 1345 or IMED 1445</p> <p><b>Course Description:</b> Exploration of the use of graphics and sound to create interactive digital media applications and/or animations using industry standard authoring software.</p> <p><b>End-of-Course Outcomes:</b> Develop an interactive digital media presentation integrating different types of media; design a navigation scheme; and demonstrate animation techniques.</p>
<p><b>Animation II</b> 1 credit ANIMAT2 • 13008400</p> <p><b>OR</b></p> <p><b>Animation II/Animation II Lab</b> 2 credits ANILAB2 • 13008410</p> <p><b>Course Description:</b> Careers in animation span all aspects of motion graphics. Within this context, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to create two- and three-dimensional animations. The instruction also assists students seeking careers in the animation industry.</p> <p><b>Required Prerequisite:</b> Animation I</p>	<p><b>Basic Animation</b> ARTV 1303 or ARTV 1403</p> <p><b>Course Description:</b> Examination of animation concepts, principles, and storyboard for basic production. Emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate animation principles; communicate conceptual ideas through storyboards; execute animation sequences; and develop artwork for animation using traditional or digital tools.</p>
<p><b>Audio/Video Production II</b> 1 credit AVPROD2 • 13008600</p> <p><b>OR</b></p> <p><b>Audio/Video Production II/ Audio/Video Production II Lab</b> 2 credits AVPLAB2 • 18008610</p> <p><b>Course Description:</b> Careers in audio and video technology and film production span all aspects of the</p>	<p><b>Digital Video</b> ARTV 1351 or ARTV 1451</p> <p><b>Course Description:</b> Producing and editing video and sound for multimedia or web productions. Emphasizes capture, editing, and outputting of video using a digital video workstation.</p> <p><b>End-of-Course Outcomes:</b> Use digital video capture and output methods; apply appropriate compression schemes for various output; integrate still graphics and animation into a production; apply principles of video production; and identify the components of a digital video system.</p>

High School Course	College WECM Equivalent
<p>audio/video communications industry. Building upon the concepts taught in Audio/Video Production, in addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the industry with a focus on pre-production, production, and post-production products. This course may be implemented in an audio format or a format with both audio and video.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Synchronize sound files with visuals and animation.</li> </ul>	<p style="text-align: center;"><b>OR</b></p> <p><b>Digital Sound ARTV 1343</b></p> <p><b>Course Description:</b> Digitizing sound and incorporating it into video games, multimedia or web projects for various delivery systems. Emphasizes compression issues, sampling, synchronizing, and resource management.</p> <p><b>End-of-Course Outcomes:</b> Generate sound files from various sources; select sounds that are appropriate for a project's content; use sound editing software to manipulate and improve sound files; incorporate sound files into a project; and synchronize sound files with visuals and animation.</p>
<p><b>Graphic Design and Illustration I</b> 1 credit <b>GRAPHDI1 • 13008800</b></p> <p><b>OR</b></p> <p><b>Graphic Design and Illustration I/ Graphic Design and Illustration I Lab</b> 2 credits <b>GRDLAB1 • 13008810</b></p> <p><b>Course Description:</b> Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. Within this context, in addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design.</p>	<p><b>Basic Graphic Design ARTC 1305 or ARTC 1405</b></p> <p><b>Course Description:</b> Graphic design with emphasis on the visual communication process. Topics include basic terminology and graphic design principles.</p> <p><b>End-of-Course Outcomes:</b> Define basic design terminology; apply the design process using graphic design principles; and demonstrate the use of design tools and equipment.</p>
<p><b>Graphic Design and Illustration II</b> 1 credit <b>GRAPHDI2 • 13008900</b></p> <p><b>OR</b></p> <p><b>Graphic Design and Illustration II/ Graphic Design and Illustration II Lab</b> 2 credits <b>GRDLAB2 • 13008910</b></p> <p><b>Course Description:</b> Careers in graphic design and illustration span all aspects of the advertising and visual communications industries. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the industry with a focus on mastery of content knowledge and skills.</p>	<p><b>Computer Illustration ARTC 1353 or ARTC 1453</b></p> <p><b>Course Description:</b> Use of the tools and transformation options of an industry-standard vector drawing program to create complex illustrations or drawings.</p> <p><b>End-of-Course Outcomes:</b> Identify terminology, advantages and limitations of vector software; use vector drawing tools to manipulate, create, and edit vector drawings for print or web; and specify file formats.</p>

High School Course	College WECM Equivalent
<p><b>Required Prerequisite:</b> Graphic Design and Illustration I</p>	
<p><b>Commercial Photography I</b> 1 credit CPHOTO1 • 13009100</p> <p><b>OR</b></p> <p><b>Commercial Photography I/ Commercial Photography I Lab</b> 2 credits CPHLAB1 • 13009110</p> <p><b>Course Description:</b> Careers in commercial photography require skills that span all aspects of the industry from setting up a shot to delivering products in a competitive market. In addition to developing knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the commercial photography industry with a focus on creating quality photographs.</p>	<p><b>Fundamentals of Photography</b> PHTC 1311 or PHTC 1411</p> <p><b>Course Description:</b> An introduction to camera operation and image production, composition, correct exposure and proper lighting.</p> <p><b>End-of-Course Outcomes:</b> Explore the use of the camera for photographing in various lighting situations; demonstrate proper use of supplemental lighting; create photographic images; manipulate camera controls for specific outcome; compose a communicative image; and present work for critical discussion.</p>
<p><b>Printing and Imaging Technology I</b> 1 credit PRIMTEC1 • 13009600</p> <p><b>OR</b></p> <p><b>Printing and Imaging Technology I/ Printing and Technology I Lab</b> 2 credits PRILAB1 • 13009610</p> <p><b>Course Description:</b> Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. In addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an understanding of the printing industry with a focus on digital prepress and digital publishing.</p>	<p><b>Digital Publishing I</b> ARTC 1313 or ARTC 1413</p> <p><b>Course Description:</b> The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout.</p> <p><b>End-of-Course Outcomes:</b> Apply fundamentals of page layout; define typographic terminology and specifications; import text and graphics into page layout programs; discuss file formats and file management techniques.</p>

High School Course	College WECM Equivalent
<p><b>Printing and Imaging Technology II</b>  <b>1 credit</b>  <b>PRIMTEC2 • 13009700</b></p> <p><b>OR</b></p> <p><b>Printing and Imaging Technology II/  Printing and Imaging Technology II Lab</b>  <b>2 credits</b>  <b>PRILAB2 • 13009710</b></p> <p><b>Course Description:</b> Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. In addition to developing advanced knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced understanding of the printing industry with a focus on digital prepress and desktop digital publishing.</p> <p><b>Required Prerequisite:</b>  Printing and Imaging Technology I</p>	<p><b>Digital Publishing II</b>  <b>ARTC 2313 or ARTC 2413</b></p> <p><b>Course Description:</b> Includes layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects.</p> <p><b>End-of-Course Outcomes:</b> Complete projects using thumbnails, roughs, and comprehensives; use industry standard page layout software to create printable advertising and print collateral; coordinate color and use the principles and elements of design.</p>
<p><b>Digital Audio Technology II</b>  <b>1 credit</b>  <b>DATECH2 • 13009960</b></p> <p><b>Course Description:</b> Digital Audio Technology II was designed to provide additional opportunities and skill sets for students interested in audio production careers such as audio for radio and television broadcasting, audio for video and film, audio for animation and game design, and music production and live sound. Digital Audio Technology II does not replace Audio Video Production courses but is recommended as a single credit, co-curricular course with an audio production technical emphasis. This course can also be paired with Digital Media (DIMEDIA). Students will be expected to develop an understanding of the audio industry with a technical emphasis on production and critical-listening skills.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Cover in greater depth the following TEKS:  (c) Knowledge and Skills 5B, 6A-B, 9A, 9B, 9D, 11A-B, 12A-E, 13A-H, 14A-D, 15A-C,16A-F.</li> </ul> <p><b>Required Prerequisite:</b>  Digital Audio Technology I</p> <p><b>Required and Recommended Resources:</b></p> <ul style="list-style-type: none"> <li>Industry standard digital audio software</li> <li>Pro Tools highly recommended</li> </ul>	<p><b>Audio Engineering I</b>  <b>MUSC 1327 or MUSC 1427</b></p> <p><b>Course Description:</b> The tools, personnel and standard workflow of a recording studio. Topics include fundamentals of sound and overview of tracking, editing, and mixing audio.</p> <p><b>Course Outcomes:</b> Identify properties of sound and electronic signals; explain microphone characteristics and placement; describe studio set-up and signal routing; explain console and recording operation techniques; and identify basic recording studio procedures.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Audio/Radio Production I</b>  <b>RTVB 1309 or RTVB 1409</b></p> <p><b>Course Description:</b> Concepts and techniques of sound production including basic recording, mixing, and editing techniques.</p> <p><b>End-of-Course Outcomes:</b> Operate a variety of production equipment; define terminology applicable to the audio/radio industry; produce audio productions that includes microphone techniques, recording, mixing, and editing; and design and complete audio productions from concept to scripting and post production.</p>

High School Course	College WECM Equivalent
<p><b>Video Game Design</b>  <b>1 credit</b>  <b>VIDGD • 13009970</b></p> <p><b>Course Description:</b> Video Game Design will allow students to explore one of the largest industries in the global marketplace and the new emerging careers it provides in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic. Students will participate in a simulation of a real video game design team while developing technical proficiency in constructing an original game design.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Cover in greater depth the following TEKS:  (c) Knowledge and Skills 4A-B, 5, 7A-E, 9A-F, 10A-D, 11A-F</li> </ul> <p><b>Recommended prerequisites for articulation to Video Game Design:</b>  Algebra AND either Animation I or Audio/Video Production I</p> <p><b>Recommended corequisite for articulation to Video Game Design:</b>  Algebra II</p>	<p><b>Introduction to Game Design and Development</b>  <b>GAME 1303 or GAME 1403</b></p> <p><b>Course Description:</b> Introduction to electronic game development and game development careers. Includes examination of history and philosophy of games, the game production process, employee factors for success in the field, and current issues and practices in the game development industry.</p> <p><b>Course Outcomes:</b> Describe the history and evolution of video and computer games and game genres; identify the phases and processes involved in developing a computer game; design a simple computer game from initial concept to final design document; and describe current trends in the game industry with regards to hiring practices and working conditions.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Video Game Design</b>  <b>GAME 1328</b></p> <p><b>Course Description:</b> Introduction to video game design techniques, which inspire artists and non-artists. Including characters, environments, architecture, static objects, user interface, and storyboards for games. Emphasizes applying 2D design concepts.</p> <p><b>End-of-Course Outcomes:</b> Describe best practices in design techniques; recommend design solutions; and identify criteria for communicating design.</p>

## Business Management and Administration

High School Course	College WECM Equivalent
<p><b>Principles of Business, Marketing, and Finance</b> 1 credit PRINBMF • 1301200</p> <p><b>Course Description:</b> Students gain knowledge and skills in economies and private enterprise systems, the impact of global business, the marketing of goods and services, advertising, and product pricing. Students analyze the sales process and financial management principles. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in business, marketing, and finance.</p>	<p><b>Introduction to Business</b> BUSG 1301</p> <p><b>Course Description:</b> Fundamental business principles including structure, functions, resources, and operational processes.</p> <p><b>End-of-Course Outcomes:</b> Identify business functions of accounting, management, marketing, and economics; and describe the relationships of social responsibility, ethics, and law; and describe the scope of global business enterprise.</p>
<p><b>Touch System Data Entry</b> 0.5 credit TSDATAE • 13011300</p> <p><b>Course Description:</b> Students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents.</p>	<p><b>Beginning Keyboarding</b> POFT 1329</p> <p><b>Course Description:</b> Skill development in keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate basic keyboarding techniques; apply proofreading and editing skills; and create basic business documents.</p>
<p><b>Business Information Management I</b> 1 credit BUSIM1 • 13011400</p> <p><b>OR</b></p> <p><b>Business Information Management I/ Business Lab</b> 2 credits BUSMLAB1 • 13011410</p> <p><b>Course Description:</b> Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Identify fundamental programming structures.</li> </ul>	<p><b>Computer Applications I</b> POFI 1301 or POFI 1401</p> <p><b>Course Description:</b> Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures. This course is designed to be repeated multiple times to improve student proficiency.</p> <p><b>End-of-Course Outcomes:</b> Identify the components of a computer system; and perform common tasks used in applications.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Introduction to Computers</b> ITSC 1301 or ITSC 1401</p> <p><b>Course Description:</b> Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources.</p> <p><b>End-of-Course Outcomes:</b> Identify the components of a computer system; use common applications; explain the impact of computers on society; identify computer careers; identify fundamental programming structures; identify ethical use of computers; and use basic operating system functions.</p>

High School Course	College WECM Equivalent
<p><b>Business Information Management II</b> 1 credit BUSIM2 • 13011500</p> <p><b>OR</b></p> <p><b>Business Information Management II/ Business Lab</b> 2 credits BUSMLAB2 • 13011510</p> <p><b>Course Description:</b> Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies, create complex word-processing documents, develop sophisticated spreadsheets using charts and graphs, and make an electronic presentation using appropriate multimedia software.</p> <p><b>Required Prerequisite:</b> Business Information Management I</p>	<p><b>Computer Applications II</b> POFI 1341 or POFI 1441</p> <p><b>Course Description:</b> Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures. This course is designed to be repeated multiple times to improve student proficiency.</p> <p><b>End-of-Course Outcomes:</b> Apply advanced skills to produce documents using current software applications.</p> <p><b>OR</b></p> <p><b>Integrated Software Applications I</b> ITSC 1309 or ITSC 1409</p> <p><b>Course Description:</b> Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software.</p> <p><b>End-of-Course Outcomes:</b> Use word processing, spreadsheet, database, and/or presentation software; and integrate applications to produce documents.</p>
<p><b>Business English</b> 1 credit BUSENGL • 13011600</p> <p><b>Course Description:</b> Students enhance communication and research skills by applying them to the business environment, in addition to exchanging information and producing properly formatted business documents using emerging technology.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Use terminology applicable to technical and business writing.</li> </ul> <p><b>Required Prerequisite:</b> English III</p>	<p><b>Business English</b> POFT 1301</p> <p><b>Course Description:</b> Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business.</p> <p><b>End-of-Course Outcomes:</b> Apply the basic rules of grammar, spelling, capitalization, number usage, and punctuation; utilize terminology applicable to technical and business writing; develop proofreading and editing skills; and write sentences and paragraphs.</p>
<p><b>Business Law</b> 1 credit BUSLAW • 13011700</p> <p><b>Course Description:</b> Business Law is designed for students to analyze various aspects of the legal environment, including ethics, the judicial system, contracts, personal property, sales, negotiable instruments, agency and employment, business organization, risk management, and real property.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Differentiate between business ethics and legal issues.</li> </ul>	<p><b>Business Law/Contracts</b> BUSG 2305</p> <p><b>Course Description:</b> Principles of law that form the legal framework for business activity including applicable statutes, contracts, and agency.</p> <p><b>End-of-Course Outcomes:</b> Define fundamental legal terminology regarding contracts, torts, property, and wills; differentiate between business ethics and legal issues; and explain required elements of torts, requirements of contracts, and various consumer laws as applied to business and individuals.</p>

High School Course	College WECM Equivalent
<p><b>Global Business</b>  <b>0.5 credit</b>  <b>GLOBBUS • 13011800</b></p> <p><b>Course Description:</b> Global Business is designed for students to analyze global trade theories, international monetary systems, trade policies, politics, and laws relating to global business as well as cultural issues, logistics, and international human resource management.</p>	<p><b>Introduction to International Business and Trade</b>  <b>IBUS 1305</b></p> <p><b>Course Description:</b> The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise.</p> <p><b>End-of-Course Outcomes:</b> Explain terms used in the international business environment; and discuss internal and external factors influencing the conduct of international business.</p>
<p><b>Human Resources Management</b>  <b>0.5 credit</b>  <b>HRMGT • 13011900</b></p> <p><b>Course Description:</b> This course is designed to familiarize students with the concepts related to human resource management, including legal requirements, recruitment and employee selection methods, and employee development and evaluation. Students will also become familiar with compensation and benefits programs as well as workplace safety, employee-management relations, and global impacts on human resources.</p>	<p><b>Human Resources Management</b>  <b>HRPO 2301</b></p> <p><b>Course Description:</b> Behavioral and legal approaches to the management of human resources in organizations.</p> <p><b>End-of-Course Outcomes:</b> Explain the development of human resources management; explain current methods of job analysis, recruitment, selection, training/development, performance management, promotion, and separation; describe management's ethical, social, and legal responsibilities; explain methods of compensation and benefits planning; and describe the role of strategic human resources planning.</p>
<p><b>Business Management</b>  <b>1 credit</b>  <b>BUSMGT • 13012100</b></p> <p><b>Course Description:</b> Business Management is designed to familiarize students with the concepts related to business management as well as the functions of management, including planning, organizing, staffing, leading, and controlling. Students will also demonstrate interpersonal and project-management skills.</p>	<p><b>Principles of Management</b>  <b>BMGT 1327</b></p> <p><b>Course Description:</b> Concepts, terminology, principles, theories, and issues in the field of management.</p> <p><b>End-of-Course Outcomes:</b> Explain various theories, processes, and functions of management; apply theories to a business environment; identify leadership roles in organizations; and describe elements of the communication process.</p>

## Finance

High School Course	College WECM Equivalent
<p><b>Money Matters</b> 1 credit MONEYM • 13016200</p> <p><b>Course Description:</b> Students will investigate money management from a personal financial perspective. Students will apply critical-thinking skills to analyze financial options based on current and projected economic factors. Students will gain knowledge and skills necessary to establish short-term and long-term financial goals. Students will examine various methods of achieving short-term and long-term financial goals through various methods such as investing, tax planning, asset allocating, risk management, retirement planning, and estate planning.</p> <p><b>Instructor Requirement:</b> Teacher must have 36 months of banking work experience.</p>	<p><b>Money and Financial Markets</b> BNKG 1340</p> <p><b>Course Description:</b> Monetary policy and its related effects on financial intermediaries. Includes financial markets, regulatory functions, and structures. Addresses investment and funds management.</p> <p><b>End-of-Course Outcomes:</b> Identify the role of the Federal Reserve and other central banks influencing the money supply; describe principles of monetary and fiscal policy as they relate to the banking industry; describe the characteristics of financial intermediaries, related markets, investments, and funds management.</p>
<p><b>Banking and Financial Services</b> 0.5 credit BANKFIN • 13016300</p> <p><b>Course Description:</b> Students will develop knowledge and skills in the economic, financial, technological, international, social, and ethical aspects of banking to become competent employees and entrepreneurs. Students will incorporate a broad base of knowledge that includes the operations, sales, and management of banking institutions to gain a complete understanding of how banks function within society.</p>	<p><b>Principles of Bank Operation</b> BNKG 1303</p> <p><b>Course Description:</b> Overview of the fundamental banking functions and the role of regulation in the banking industry. Explanation of financial products and services to various markets.</p> <p><b>End-of-Course Outcomes:</b> Describe the fundamental banking terminology and functions of credit, deposit, and payment; identify the characteristics of banking products, services, and markets; describe the role of regulatory agencies and bank operations; and describe the role of technology as related to banking operations.</p>
<p><b>Accounting I</b> 1 credit ACCOUNT1 • 13016600</p> <p><b>Course Description:</b> Students will investigate the field of accounting, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students will reflect on this knowledge as they engage in the process of recording, classifying, summarizing, analyzing, and communicating accounting information. Students will formulate and interpret financial information for use in management decision making.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Define accounting terminology.</li> </ul>	<p><b>Introduction to Accounting I</b> ACNT 1303 or ACNT 1403</p> <p><b>Course Description:</b> A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll.</p> <p><b>End-of-Course Outcomes:</b> Define accounting terminology; analyze and record business transactions in a manual and computerized environment; complete the accounting cycle; prepare financial statements; apply accounting concepts related to cash and payroll; prepare bank reconciliations; and correct accounting errors.</p> <p style="text-align: center;"><b>OR</b></p>

High School Course	College WECM Equivalent
	<p><b>Principles of Accounting ACNT 1325 or ACNT 1425</b></p> <p><b>Course Description:</b> A study of accounting concepts and their application in transaction analysis and financial statement preparation. Emphasis on the accounting cycle for service and merchandising enterprises.</p> <p><b>End-of-Course Outcomes:</b> Apply generally accepted accounting principles, concepts, and procedures; and complete the accounting cycle for service and merchandising enterprises.</p>

## Health Science

High School Course	College WECM Equivalent
<p><b>Medical Terminology</b> 1 credit <b>MEDTERM • 13020300</b></p> <p><b>Course Description:</b> The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.</p> <p><b>AND</b></p> <p><b>Principles of Health Science</b> 1 credit <b>PRINHLSC • 13020200</b></p> <p><b>OR</b></p> <p><b>Health Science Theory</b> 1 credit <b>HLTHSCI • 13020400</b></p> <p><b>OR</b></p> <p><b>Health Science Theory/ Health Science Clinical</b> 2 credits <b>HLSClin • 13020410</b></p> <p><b>Special Note:</b> Separate training must be obtained for each course.</p>	<p><b>Essentials of Medical Terminology</b> <b>HPRS 1106 or HPRS 1206</b></p> <p><b>Course Description:</b> A study of medical terminology, word origin, structure, and application.</p> <p><b>End-of-Course Outcomes:</b> Define, pronounce, and spell medical terms with the use of medical references as resource tools; utilize terms in context; analyze medical terms; examine word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Medical Terminology</b> <b>MDCA 1213 or MDCA 1313</b></p> <p><b>Course Description:</b> A study and practical application of a medical vocabulary system. Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.</p> <p><b>End-of-Course Outcomes:</b> Define terms and abbreviations which apply to the structural organization of the body; analyze and identify terms and their components from a list, including prefixes, suffixes, roots, and combining forms; pronounce, spell, and define medical terms; and interpret the contents of a written patient medical scenario.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Medical Terminology I</b> <b>HITT 1205 or HITT 1305</b></p> <p><b>Course Description:</b> Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.</p> <p><b>End-of-Course Outcomes:</b> Identify, pronounce, and spell medical terms; use terms in context; utilize prefixes, suffixes, root words, and plurals to construct medical terms; analyze medical terms; translate abbreviations; and interpret symbols.</p>

High School Course	College WECM Equivalent
<p><b>Health Science Theory</b> 1 credit HLTHSCI • 13020400</p> <p><b>OR</b></p> <p><b>Health Science Theory/ Health Science Clinical</b> 2 credits HLSCLIN • 13020410</p> <p><b>Course Description:</b> The Health Science Theory course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.</p> <p><b>Required Prerequisites:</b> Principles of Health Science and Biology</p>	<p><b>Introduction to Health Professions</b> HPRS 1101 or HPRS 1201</p> <p><b>Course Description:</b> An overview of roles of various members of the health care system, educational requirements, and issues affecting the delivery of health care.</p> <p><b>End-of-Course Outcomes:</b> Identify the roles of various health care professionals; outline state and national credentialing and licensing requirements; describe legal and ethical issues affecting the practice of health care professionals; give examples of professionalism; and define the rights and responsibilities of health care professionals.</p> <p><b>OR</b></p> <p><b>Basic Health Professional Skills</b> HPRS 1204 or HPRS 1304</p> <p><b>Course Description:</b> A study of the concepts that serve as the foundation for health profession courses, including client care and safety issues, basic client monitoring, and health documentation methods.</p> <p><b>End-of-Course Outcomes:</b> Comply with national, state, and local regulatory agencies; respond to basic medical emergencies; perform client-monitoring skills; and document health care.</p>
<p><b>Anatomy and Physiology</b> 1 credit ANATPHYS • 13020600</p> <p><b>Course Description:</b> The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Include elements of pathophysiology.</li> <li>• Include all developmental stages of the human body.</li> </ul> <p><b>Required Prerequisites:</b> Biology and a second science credit</p> <p><b>Instructor Requirement:</b> Teacher with an associate's degree must have a minimum of 3 years of medical work experience. Teacher with a bachelor's degree or higher must have some medical work experience.</p>	<p><b>Anatomy and Physiology for Allied Health</b> VNSG 1320 or VNSG 1420</p> <p><b>Course Description:</b> Study of the structure (anatomy) and function (physiology) of the human body, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems.</p> <p><b>End-of-Course Outcomes:</b> Identify the structure of each of the body systems; describe the functions of each body system; and discuss the interrelationship of systems in maintaining homeostasis.</p> <p><b>OR</b></p> <p><b>Anatomy and Physiology for Medical Assistants</b> MDCA 1309 or MDCA 1409</p> <p><b>Course Description:</b> Emphasis on structure and function of human cells, tissues, organs, and systems with overview of common pathophysiology.</p> <p><b>End-of-Course Outcomes:</b> Identify and correlate cells, tissues, organs, and systems of the human body; differentiate normal from abnormal structure and function; and differentiate all body systems, their organs, and relevant pathophysiology.</p>

High School Course	College WECM Equivalent
<p><b>Medical Microbiology</b> 1 credit MICRO • 13020700</p> <p><b>Course Description:</b> The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug resistant organisms, and emerging diseases.</p> <p><b>Required Prerequisites:</b> Biology and Chemistry</p> <p><b>Instructor Requirement:</b> Teacher with an associate’s degree must have a minimum of 3 years of medical work experience. Teacher with a bachelor’s degree or higher must have some medical work experience.</p>	<p><b>Clinical Microbiology</b> MLAB 2434 or MLAB 2534</p> <p><b>Course Description:</b> Instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, quality control, quality assurance, safety, setup, identification, susceptibility testing, and reporting results.</p> <p><b>End-of-Course Outcomes:</b> Apply principles of safety, quality assurance and quality control in Clinical Microbiology; evaluate specimen acceptability; describe morphology and physiology of microbes; identify and classify microorganisms; demonstrate sterile technique; perform and interpret antimicrobial susceptibility testing; select additional procedures based on preliminary results; and correlate test results with patient condition(s).</p>
<p><b>Pharmacology</b> 1 credit PHARMC • 13020950</p> <p><b>Course Description:</b> The Pharmacology course is designed to study how natural and synthetic chemical agents such as drugs affect biological systems. Knowledge of the properties of therapeutic agents is vital in providing quality health care. It is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Students can demonstrate basic dosage calculations.</li> </ul> <p><b>Required Prerequisites:</b> Biology and Chemistry</p>	<p><b>Introduction to Pharmacy</b> PHRA 1201 or PHRA 1301</p> <p><b>Course Description:</b> An overview of the qualifications, operational guidelines, and job duties of a pharmacy technician.</p> <p><b>End-of-Course Outcomes:</b> Outline the history of the pharmacy profession; describe the role of the pharmacy technician in a variety of settings; list the qualifications required for obtaining certification and registration; identify standards of law and ethics governing pharmacy practice; define key medical terms and abbreviations related to pharmacy practice; explain the importance of utilizing pharmacy resource materials; and summarize safety standards.</p>
<p><b>Health Informatics</b> 1 credit HLTHINF • 13020960</p> <p><b>Course Description:</b> The Health Informatics course is designed to provide knowledge of one of the fastest growing areas in both academic and professional fields. The large gap between state of the art computer technologies and the state of affairs in health care information technology has generated demand for information and health professionals who can effectively design, develop, and use technologies such as electronic medical records, patient monitoring systems, and digital libraries, while managing the vast amount of data generated by these systems.</p>	<p><b>Health Information Systems</b> HITT 1211 or HITT 1311</p> <p><b>Course Description:</b> Introduction to health IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health.</p> <p><b>End-of-Course Outcomes:</b> Describe general functions, purposes and benefits of health information systems; describe the evolution and adoption of health information systems; compare health information systems in terms of their ability to support the requirements of a health care enterprise; explain the impact of electronic health records on reporting outcomes; explain strategies to minimize major barriers to the adoption of electronic health records; explain the principles of health care data exchange and standards; review workflow design and assessment, and their</p>

High School Course	College WECM Equivalent
<p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Students must demonstrate application of techniques for collecting, storing, securing, retrieving, and reporting health care data.</li> </ul> <p><b>Required Prerequisites:</b> Business Management I and Medical Terminology</p> <p><b>Required Resources:</b> Students must have access to computers and appropriate electronic medical record software.</p>	<p>relationship to patient care, productivity and data analysis; propose the hardware, software, operating system and networking considerations necessary for effective data storage and use in health care organizations; and utilize the tools and techniques for collecting, storing, securing, retrieving, and reporting health care data.</p>

## Hospitality and Tourism

High School Course	College WECM Equivalent
<p><b>Hotel Management</b> 1 credit <b>HOTELMGT • 13022300</b></p> <p><b>Course Description:</b> Hotel Management focuses on the knowledge and skills needed to pursue staff and management positions available in the hotel industry. This in-depth study of the lodging industry includes departments within a hotel such as front desk, food and beverage, housekeeping, maintenance, human resources, and accounting. This course will focus on, but not be limited to, professional communication, leadership, management, human resources, technology, and accounting.</p>	<p><b>Front Office Management</b> <b>HAMG 1213 or HAMG 1313</b></p> <p><b>Course Description:</b> Functions of front office operations as they relate to customer service. Includes a study of front office interactions with other departments in the lodging operation.</p> <p><b>End-of-Course Outcomes:</b> Identify the various service levels and market segments in the lodging industry as they pertain to the front office area of the hospitality operation; and identify front office responsibilities, accounting procedures, revenue management, checkout and settlement procedures, and night audit functions and verification.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Guest Room Management</b> <b>HAMG 1242 or HAMG 1342</b></p> <p><b>Course Description:</b> A study of the working relationship among housekeeping, front office, and maintenance in the lodging industry.</p> <p><b>End-of-Course Outcomes:</b> Identify the steps for planning, organizing, and staffing as they relate to guest room operations; explain how housekeeping operations are directed and controlled; explain the budgeting function; and identify cleaning duties, cleaning supplies, laundry needs of guest room services and sustainability practices.</p>
<p><b>Travel and Tourism Management</b> 1 credit <b>TRTORMGT • 13022500</b></p> <p><b>Course Description:</b> Travel and Tourism Management incorporates management principles and procedures of the travel and tourism industry as well as destination geography, airlines, international travel, cruising, travel by rail, lodging, recreation, amusements, attractions, and resorts. Employment qualifications and opportunities are also included in this course.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Discuss the history and growth of travel and tourism and how they relate to the marketplace.</li> <li>• Define the role of governments in the travel industry.</li> <li>• Identify how tourism is an important source of revenue for a destination.</li> <li>• Identify types of travelers.</li> </ul>	<p><b>Introduction to Travel and Tourism</b> <b>TRVM 1300</b></p> <p><b>Course Description:</b> An overview of the travel and tourism industry. Emphasis on travel careers and the impact on society.</p> <p><b>End-of-Course Outcomes:</b> Identify the qualifications needed for the many careers in the travel and tourism industry; discuss the history and growth of travel and tourism and how they relate to the marketplace; define the role of governments in the travel industry and identify how tourism is an important source of revenue for a destination; describe types of geography as it relates to travelers, and identify types of travel and travelers; identify the components of the travel and tourism industry, define the channels of distribution, and discuss how the travel product is promoted and marketed.</p>

High School Course	College WECM Equivalent
<p><b>Culinary Arts</b>  <b>2 credits</b>  <b>CULARTS • 13022600</b></p> <p><b>Course Description:</b> Culinary Arts begins with the fundamentals and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue a national sanitation certification or other appropriate industry certifications. This course is offered as a laboratory-based course.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Discuss Occupational Safety and Health Administration (OSHA) requirements and effective workplace safety programs.</li> </ul> <p><b>Student Requirement:</b>  Students MUST obtain Serv-Safe certification during this course for credit to be granted at the college level.</p>	<p><b>Sanitation and Safety</b>  <b>CHEF 1205 or CHEF 1305</b></p> <p><b>Course Description:</b> A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.</p> <p><b>End-of-Course Outcomes:</b> Identify causes of and prevention procedures for food-borne illness, intoxication, and infection; discuss personal hygiene and safe food handling procedures; describe food storage and refrigeration techniques; explain sanitation of dishes, equipment, and kitchens including cleaning material, garbage, and refuse disposal; discuss Occupational Safety and Health Administration (OSHA) requirements and workplace safety programs.</p>
<p><b>Hospitality Services</b>  <b>2 credits</b>  <b>HOSPSRVS • 13022800</b></p> <p><b>Course Description:</b> Hospitality Services provides students with the academic and technical preparation to pursue high-demand and high-skill careers in hospitality related industries. The knowledge and skills are acquired within a sequential, standards-based program that integrates hands-on and project-based instruction. Standards included in the Hospitality Services course are designed to prepare students for nationally recognized industry certifications, postsecondary education, and entry-level careers. In addition, Hospitality Services is designed so that performance standards meet employer expectations, enhancing the employability of students. Instruction may be delivered through laboratory training or through internships, mentoring, or job shadowing.</p>	<p><b>Introduction to Hospitality Industry</b>  <b>HAMG 1221 or HAMG 1321</b></p> <p><b>Course Description:</b> An exploration of the elements and career opportunities within the multiple segments of the hospitality industry.</p> <p><b>End-of-Course Outcomes:</b> Identify the segments and career opportunities in the hospitality industry; describe the current issues facing the hospitality industry; and explain the impact of the history, growth and trends in the hospitality industry.</p>

## Human Services

High School Course	College WECM Equivalent
<p><b>Lifetime Nutrition and Wellness</b>  <b>0.5 credit</b>  <b>LNURTWEL • 13024500</b></p> <p><b>Course Description:</b> This is a laboratory course that allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences.</p>	<p><b>Nutrition for the Food Service Professional</b>  <b>IFWA 1218 or IFWA 1318</b></p> <p><b>Course Description:</b> An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques.</p> <p><b>End-of-Course Outcomes:</b> Identify nutrients and their sources, functions, digestion, and metabolism; explain healthy cooking techniques; analyze and modify recipes for healthier food production; and evaluate and prepare diets and menus in accordance with dietary guidelines and restrictions.</p>
<p><b>Child Development</b>  <b>1 credit</b>  <b>CHILDDEV • 13024700</b></p> <p><b>Course Description:</b> Child Development is a technical laboratory course that addresses knowledge and skills related to child growth and development from prenatal through school-age children, equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children and investigate careers related to the care and education of children.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Discuss types and techniques of observation.</li> </ul>	<p><b>Child Growth and Development</b>  <b>CDEC 1354</b></p> <p><b>Course Description:</b> Physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.</p> <p><b>End-of-Course Outcomes:</b> Summarize principles of growth and development and developmental stages in various domains; discuss theories of development, the impact of developmental processes on early childhood practices and types and techniques of observation; and explain the importance of play. Demonstrate skills in practical application of developmental principles and theories, observation techniques and recognition of growth and developmental patterns.</p>
<p><b>Child Guidance</b>  <b>2 credits</b>  <b>CHILDGUI • 13024800</b></p> <p><b>Course Description:</b> Child Guidance is a technical laboratory course that addresses the knowledge and skills related to child growth and guidance equipping students to develop positive relationships with children and effective caregiver skills. Students use these skills to promote the well-being and healthy development of children, strengthen a culturally diverse society, and pursue careers related to the care, guidance, and education of children, including those with special needs. Instruction may be delivered through school-based laboratory training or through work-based delivery arrangements such as cooperative education, mentoring, and job shadowing.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Application of guidance intervention with a child.</li> <li>• Prepare DAP schedule, routines, transitions.</li> </ul>	<p><b>Child Guidance</b>  <b>CDEC 1319 or CDEC 1419</b></p> <p><b>Course Description:</b> An exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement, and cultural influences.</p> <p><b>End-of-Course Outcomes:</b> Describe theories related to child guidance; explain how guidance promotes autonomy, self-discipline, and pro-social skills; identify familial and cultural influences on child guidance; and apply guidance techniques.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Child Development Associate Training II</b>  <b>CDEC 2322 or CDEC 2422</b></p> <p><b>Course Description:</b> A continuation of the study of the requirements for the Child Development Associate credential (CDA). The six functional areas of study include safe, healthy, learning environment, self, social, and</p>

High School Course	College WECM Equivalent
<ul style="list-style-type: none"> <li>• Thirty hours (30 hrs) observation at a childcare facility.</li> </ul>	<p>guidance.</p> <p><b>End-of-Course Outcomes:</b> Explain methods to establish and maintain a safe, healthy learning environment; describe ways to support social and emotional development; describe techniques used to provide positive guidance; and utilize skills in writing, speaking, problem-solving, time management, and record keeping.</p>

# Information Technology

High School Course	College WECM Equivalent
<p><b>Principles of Information Technology</b> 1 credit PRINIT • 13027200</p> <p><b>Course Description:</b> Students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Explain the impact of computers on society.</li> </ul>	<p><b>Introduction to Computers</b> ITSC 1301 or ITSC 1401</p> <p><b>Course Description:</b> Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources.</p> <p><b>End-of-Course Outcomes:</b> Identify the components of a computer system; use common applications; explain the impact of computers on society; identify computer careers; identify fundamental programming structures; identify ethical use of computers; and use basic operating system functions.</p>
<p><b>Computer Maintenance</b> 1 credit COMPMTN • 13027300</p> <p><b>OR</b></p> <p><b>Computer Maintenance/ Computer Maintenance Lab</b> 2 credits COMMTLAB • 13027310</p> <p><b>Course Description:</b> Students will acquire knowledge of computer maintenance and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technologies.</p>	<p><b>Introduction to Computer Maintenance</b> CPMT 1311 or CPMT 1411</p> <p><b>Course Description:</b> Introduction to the installation, configuration, and maintenance of a microcomputer system.</p> <p><b>End-of-Course Outcomes:</b> Identify modules that make up a computer system and its operation; identify each type of computer bus structure; assemble/setup microcomputer systems and adapter/interface boards; and install/connect associated peripherals.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Personal Computer Hardware</b> ITSC 1325 or ITSC 1425</p> <p><b>Course Description:</b> Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting.</p> <p><b>End-of-Course Outcomes:</b> Assemble/setup and upgrade personal computer systems; diagnose and isolate faulty components; optimize system performance; and install/connect peripherals.</p>
<p><b>Networking</b> 1 credit NETWRK • 13027400</p> <p><b>OR</b></p> <p><b>Networking/Networking Lab</b> 2 credits NETWRLAB • 13027410</p> <p><b>Course Description:</b> Students will develop knowledge of the concepts and skills related to data networking</p>	<p><b>Fundamentals of Networking Technologies</b> ITNW 1325 or ITNW 1425</p> <p><b>Course Description:</b> Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.</p> <p><b>End-of-Course Outcomes:</b> Identify and use network transmission media; explain the OSI model; Identify the characteristics of network topologies and protocols; identify the functions of a network operating system and distinguish</p>

High School Course	College WECM Equivalent
<p>technologies and practices in order to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.</p>	<p>between centralized, client/server, and peer-to-peer systems; and distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN.</p>
<p><b>Computer Technician Practicum</b>  <b>2 credits</b>  <b>COMPT1 • 13027500</b>  <b>COMPT2 • 13027510</b></p> <p><b>OR</b></p> <p><b>Computer Technician Practicum/  Extended Computer Technician Practicum</b>  <b>3 credits</b>  <b>EXCOMPT1 • 13027505</b>  <b>EXCOMPT2 • 13027515</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>• Use computer-related test equipment.</li> </ul>	<p><b>Computer Systems Maintenance</b>  <b>CPMT 1345 or CPMT 1445</b></p> <p><b>Course Description:</b> A study of the components within a computer system. Development of testing and troubleshooting skills.</p> <p><b>End-of-Course Outcomes:</b> Explain the functions of components in a computer system; use computer related test equipment; and use of hardware and software maintenance and troubleshooting tools.</p>
<p><b>Computer Programming I</b>  <b>1 credit</b>  <b>COMPPRO1 • 13027600</b></p> <p><b>Course Description:</b> Students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.</p>	<p><b>Computer Programming</b>  <b>ITSE 1302 or ITSE 1402</b></p> <p><b>Course Description:</b> Introduction to computer programming including design, development, testing, implementation, and documentation.</p> <p><b>End-of-Course Outcomes:</b> Design, write, test, and document computer programs.</p>

High School Course	College WECM Equivalent
<p><b>Computer Programming II</b> 1 credit COMPPRO2 • 13027700</p> <p><b>Course Description:</b> Students will expand their knowledge and skills in structured programming techniques and concepts by addressing more complex problems and developing comprehensive programming solutions. Students will analyze the social responsibility of business and industry regarding the significant issues relating to environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.</p> <p><b>Required Prerequisite:</b> Computer Programming I</p>	<p><b>Advanced Computer Programming</b> ITSE 2359 or ITSE 2459</p> <p><b>Course Description:</b> Advanced programming techniques including file access methods, data structures, modular programming, program testing and documentation.</p> <p><b>End-of-Course Outcomes:</b> Develop, write and document programs containing data structures; and incorporate input/output file handling techniques.</p>
<p><b>Digital Media</b> 1 credit DIMEDIA • 13027800</p> <p><b>Course Description:</b> Students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve a problem. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.</p>	<p><b>Introduction to Digital Media</b> IMED 1301 or IMED 1401</p> <p><b>Course Description:</b> Theories, elements, and hardware/software components of digital media. Emphasis on conceptualizing and producing digital media presentations.</p> <p><b>End-of-Course Outcomes:</b> Produce a digital media presentation; select optimal digital media strategies for various delivery systems; and examine digital media industry career opportunities.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Digital Imaging I</b> ARTC 1302 or ARTC 1402</p> <p><b>Course Description:</b> Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.</p> <p><b>End-of-Course Outcomes:</b> Identify terminology, advantages and limitations of image editing software; distinguish bit-mapped resolutions for image acquisitions and output devices; use digital editing and painting tools; use basic half-tone theory in production of images, manipulate, create, and edit digital images for print and for web; specify appropriate file formats.</p>

High School Course	College WECM Equivalent
<p><b>Web Technologies</b>  <b>1 credit</b>  <b>WEBTECH • 13027900</b></p> <p><b>Course Description:</b> Students will learn to make informed decisions and apply the decisions to the field of IT. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.</p>	<p><b>Web Design I</b>  <b>IMED 1316 or IMED 1416</b></p> <p><b>Course Description:</b> Instruction in web design and related graphic design including mark-up languages, and browser issues.</p> <p><b>End-of-Course Outcomes:</b> Identify how the Internet functions with specific attention to the file transfer; apply design techniques in the creation and optimization of graphics and other embedded elements; demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards; design, create, test, and maintain a web site.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Internet/Web Page Development</b>  <b>ITSC 1319</b></p> <p><b>Course Description:</b> Instruction in the use of Internet concepts and the introduction to web page design and development.</p> <p><b>End-of-Course Outcomes:</b> Identify basic Internet concepts and terminology; use electronic communication methods; and develop web pages.</p>

## Law, Public Safety, Corrections and Security

High School Course	College WECM Equivalent
<p><b>Principles of Law, Public Safety, Corrections, and Security</b>  <b>1 credit</b>  <b>PRINLPCS • 13029200</b></p> <p><b>Course Description:</b> This course introduces students to professions in law enforcement, protective services, corrections, firefighting, and emergency management services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services. The course provides students with an overview of the skills necessary for careers in law enforcement, fire service, protective services, and corrections.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Distinguish between the civil and criminal court systems.</li> </ul>	<p><b>Introduction to Criminal Justice</b>  <b>CJSA 1322</b></p> <p><b>Course Description:</b> History and philosophy of criminal justice and ethical considerations; crime defined; its nature and impact; overview of criminal justice system; law enforcement; court system; prosecution and defense; trial process; corrections.</p> <p><b>End-of-Course Outcomes:</b> Describe and explain the history, philosophy and ethical considerations of criminal justice; define the nature and impact of crime on society and how it is integrated in to the criminal justice system; distinguish between the civil and criminal courts; and interpret the relationship between the components of the criminal justice system.</p>
<p><b>Criminal Investigation</b>  <b>1 credit</b>  <b>CRINVEST • 13029550</b></p> <p><b>Course Description:</b> Criminal Investigation is a course that introduces students to the profession of criminal investigations. Students will understand basic functions of criminal investigations and procedures and will learn how to investigate or follow up during investigations. Students will learn terminology and investigative procedures related to criminal investigation, crime scene processing, evidence collection, fingerprinting, and courtroom presentation. Through case studies and simulated crime scenes, students will collect and analyze evidence such as fingerprint analysis, bodily fluids, hairs, fibers, shoe and tire impressions, bite marks, drugs, tool marks, firearms and ammunition, blood spatter, digital evidence, and other types of evidence.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>High school lab space with safety features and basic crime scene kit used in criminal investigations.</li> <li>Students complete all practical lab exercises and hands-on activities associated with the TEKS for this course.</li> </ul> <p><b>Required Prerequisites:</b>            Law Enforcement I and Court Systems and Practices</p>	<p><b>Criminal Investigation</b>  <b>CJSA 1342</b></p> <p><b>Course Description:</b> Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation.</p> <p><b>End-of-Course Outcomes:</b> Define the goals and objectives of criminal investigation; demonstrate ability to conduct proper crime scene investigations; illustrate the use of forensic science for various statutory offenses; and organize the criminal case including field notes, reports, crime scene activities, and mandatory documentation of statutory warning.</p>

High School Course	College WECM Equivalent
<p><b>Court Systems and Practices</b>  <b>1 credit</b>  <b>COURTSP • 13029600</b></p> <p><b>Course Description:</b> Court Systems and Practices is an overview of the federal and state court systems. The course identifies the roles of judicial officers and the trial processes from pretrial to sentencing and examines the types and rules of evidence. Emphasis is placed on constitutional laws for criminal procedures such as search and seizure, stop and frisk, and interrogation.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>List the elements of crimes using the Texas statutes as an illustration.</li> </ul>	<p><b>Fundamentals of Criminal Law</b>  <b>CJSA 1327</b></p> <p><b>Course Description:</b> A study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Texas statutes as illustrations; criminal responsibility.</p> <p><b>End-of-Course Outcomes:</b> Explain the historical and philosophical development of the nature of criminal law; describe definitions and concepts of criminal law, classifications of crimes, the elements of offenses and penalties using Texas statutes as illustrations; and discuss criminal responsibilities as they apply to the criminal statutes. (This course is parallel to the Academic Course Guide Manual [ACGM] course, CRIJ 1310.)</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Court Systems and Practices</b>  <b>CJSA 1313</b></p> <p><b>Course Description:</b> The judiciary in the criminal justice system; structure of the American court system; prosecution; right to counsel; pre-trial release; grand juries; adjudication process; types and rules of evidence, sentencing.</p> <p><b>End-of-Course Outcomes:</b> Describe the American judiciary system and its structure; identify the roles of judicial officers; identify the trial processes from pretrial to sentencing; and interpret the role of evidence. (This course is parallel to the Academic Course Guide Manual [ACGM] course, CRIJ 1306).</p>

# Manufacturing

High School Course	College WECM Equivalent
<p><b>Welding II</b> 2 credits WELD2 • 13032400</p> <p><b>OR</b></p> <p><b>Welding II/Welding II Lab</b> 3 credits WELDLAB2 • 13032410</p> <p><b>Course Description:</b> Welding II builds on the knowledge and skills developed in Welding I. Students will develop advanced welding concepts and skills as related to personal and career development. Students will integrate academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.</p> <p><b>Required Prerequisite:</b> Welding I</p>	<p><b>Welding Fundamentals</b> WLDG 1421 or WLDG 1521</p> <p><b>Course Description:</b> An introduction to the fundamentals of equipment used in oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate safety procedures associated with oxy-fuel and arc process; perform basic welds using oxy-fuel and arc welding equipment; and identify various metals.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Introduction to Shielded Metal Arc Welding (SMAW)</b> WLDG 1428 or WLDG 1528</p> <p><b>Course Description:</b> An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, and various joint designs.</p> <p><b>End-of-Course Outcomes:</b> Select electrodes and amperage settings for various thicknesses of materials and welding positions; define principles of arc welding; explain electrode classifications; perform SMAW operations utilizing various positions electrodes and joint designs.</p>
<p><b>Precision Metal Manufacturing I</b> 2 credits PREMMAN1 • 13032500</p> <p><b>Course Description:</b> This course will provide the knowledge, skills, and technologies required for employment in precision machining. While the course is designed to provide necessary skills in machining, it also provides a real-world foundation for any engineering discipline. This course may address a variety of materials such as plastics, ceramics, and wood in addition to metal. Students will develop knowledge of the concepts and skills related to precision metal manufacturing to apply them to personal and career development. This course supports integration of academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for success. This course is designed to provide entry-level employment for the student or articulated credit integration into a community college and dual credit with a community college with completion of the advanced course.</p>	<p><b>Basic Machine Shop I</b> MCHN 1338 or MCHN 1438</p> <p><b>Course Description:</b> A course that introduces the student to machining fundamentals. The student will use basic machine tools including the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.</p> <p><b>End-of-Course Outcomes:</b> Demonstrate set-up and use of the lathe, milling machine, drill press, power saw, and bench grinder applying good housekeeping, and proper safety. Use precision instruments to perform bench work including part layout, drilling, reaming, taping, press fitting, location of hole centers and surfaces; set up power saws for cutoff operation; demonstrate tooling maintenance, and hazardous material handling. Perform preventative maintenance. Interpret blueprints.</p>

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<p><b>Precision Metal Manufacturing II</b>  <b>2 credits</b>  <b>PREMMAN2 • 13032600</b></p> <p><b>OR</b></p> <p><b>Precision Metal Manufacturing II/  Precision Metal Manufacturing II Lab</b>  <b>3 credits</b>  <b>PRMMLAB2 • 13032610</b></p> <p><b>Course Description:</b> This course will provide students the knowledge, skills, and technologies required for employment in precision machining. While this course is designed to provide necessary skills in machining, it also provides a real-world foundation for any engineering discipline. This course addresses a variety of materials such as plastics, ceramics, and wood in addition to metal. Students will develop knowledge of the concepts and skills related to these systems to apply them to personal and career development. This course supports integration of academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for success. This course is designed to provide entry-level employment for the student or articulated credit integration into a community college and dual credit with a community college with completion of the advanced course.</p> <p><b>Required Prerequisite:</b>  Precision Metal Manufacturing I</p>	<p><b>Basic Machine Shop II</b>  <b>MCHN 1341 or MCHN 1441</b></p> <p><b>Course Description:</b> A continuation of Basic Machine Shop I.</p> <p><b>End-of-Course Outcomes:</b> Identify machine parts and their functions; select layout tools and techniques; define machine shop terminology; perform basic machine setups; calculate common shop formulas; perform semi-precision layout; demonstrate basic machine operations; and apply proper measuring tools. Demonstrate industry standard safety practices.</p>

## Marketing

High School Course	College WECM Equivalent
<p><b>Entrepreneurship</b>  <b>1 credit</b>  <b>ENTREP • 13034400</b></p> <p><b>Course Description:</b> Students will gain the knowledge and skills needed to become an entrepreneur. Students will learn the principles necessary to begin and operate a business. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services. In addition, students will understand the capital required, the return on investment desired, and the potential for profit.</p>	<p><b>Small Business Management/Entrepreneurship</b>  <b>BUSG 2309</b></p> <p><b>Course Description:</b> Starting, operating, and growing a small business. Includes essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies, and legal issues.</p> <p><b>End-of-Course Outcomes:</b> Identify management skills for a small business; outline issues related to choosing a business and obtaining a return on investment; and create a business plan.</p>
<p><b>Advanced Marketing</b>  <b>2 credits</b>  <b>ADVMKTG • 13034700</b></p> <p><b>Course Description:</b> Students will gain knowledge and skills that help them become proficient in one or more of the marketing functional areas. Students will illustrate appropriate management and research skills to solve problems related to marketing. This course covers technology, communication, and customer-service skills.</p> <p><b>Required Prerequisite:</b>            One credit from the courses in the Marketing Career Cluster</p>	<p><b>Principles of Marketing</b>  <b>MRKG 1311</b></p> <p><b>Course Description:</b> Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues.</p> <p><b>End-of-Course Outcomes:</b> Identify the marketing mix components in relation to market segmentation; explain the environmental factors that influence consumer and organizational decision-making processes; and outline a marketing plan.</p>

## Science, Technology, Engineering and Mathematics

High School Course	College WECM Equivalent
<p><b>Biotechnology II</b>  <b>1 credit</b>  <b>BIOTECH2 • 13036450</b></p> <p><b>Course Description:</b> Biotechnology II has the components of any rigorous scientific or bioengineering program of study from the problem identification, investigation design, data collection, data analysis, and formulation and presentation of the conclusions. This course applies the standard skills mastered in Biotechnology I and includes assay design. After taking this course, students should be prepared for entry-level lab technician jobs.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Students apply appropriate regulations and technical information to a real-world project or process.</li> </ul> <p><b>Required Prerequisites:</b>            Biotechnology I and Chemistry</p> <p><b>Required Resources:</b>            Appropriate measuring equipment and basic lab equipment (e.g., balances, pH meters, spectrophotometers, microcentrifuges, micropipettes). Refer to the Common Assessments Handbook for Biotechnology &amp; Biomedical Skills Standards for Research and Development for details.</p>	<p><b>Biotechnology Laboratory Methods and Techniques</b>  <b>BITC 1302 or BITC 1402</b></p> <p><b>Course Description:</b> Laboratory operations, management, equipment, instrumentation, quality control techniques, and safety procedures. Includes laboratory practice in using pH meters, spectrophotometers, preparing buffers and solutions, and performing measurements and separatory techniques.</p> <p><b>End-of-Course Outcomes:</b> Prepare solutions and reagents to specifications; demonstrate laboratory calculations; use a variety of laboratory instruments including pH meters, spectrophotometers, and chromatography equipment; perform separatory techniques to specifications; and demonstrate appropriate laboratory safety and management.</p>
<p><b>Engineering Design and Presentation I</b>  <b>1 credit</b>  <b>ENGDSPR1 • 13036500</b></p> <p><b>Course Description:</b> This course is a continuation of knowledge and skills learned in Principles of Applied Engineering. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.</p> <p><b>Enhancement:</b></p> <ul style="list-style-type: none"> <li>Apply lettering techniques.</li> </ul> <p><b>Required Prerequisite:</b>            Algebra I</p>	<p><b>Technical Drafting</b>  <b>DFTG 1305 or DFTG 1405</b></p> <p><b>Course Description:</b> Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, and auxiliary views.</p> <p><b>End-of-Course Outcomes:</b> Create technical sketches, geometric constructions, orthographic projections, pictorial/sectional views, dimension drawings, and apply lettering techniques.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Basic Computer-Aided Drafting</b>  <b>DFTG 1309 or DFTG 1409</b></p> <p><b>Course Description:</b> An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale.</p> <p><b>End-of-Course Outcomes:</b> Identify terminology and basic functions used with CAD software; use CAD hardware and software to create, organize, display, and plot/print working</p>

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	drawings; and use file management techniques.
<p><b>AC/DC Electronics</b>  <b>1 credit</b>  <b>ACDCELEC • 13036800</b></p> <p><b>Course Description:</b> AC/DC Electronics focuses on the basic electricity principles of alternating current/direct current (AC/DC) circuits. Students will demonstrate knowledge and applications of circuits, electronic measurement, and electronic implementation. Through use of the design process, students will transfer academic skills to component designs in a project-based environment. Students will use a variety of computer hardware and software applications to complete assignments and projects. Additionally, students will explore career opportunities, employer expectations, and educational needs in the electronics industry.</p>	<p><b>Electricity Principles</b>  <b>CETT 1302 or CETT 1402</b></p> <p><b>Course Description:</b> Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operations.</p> <p><b>End-of-Course Outcomes:</b> Identify basic principles of electricity (A/C and D/C), voltage, current, and circuitry; apply Ohm's law to electrical calculations; use test equipment to measure continuity, voltage, and current values; and use electrical safety practices.</p>

## Transportation, Distribution and Logistics

High School Course	College WECM Equivalent
<p><b>Automotive Technology II: Automotive Service</b>  <b>2 credits</b>  <b>AUTOTEC2 • 13039700</b></p> <p><b>OR</b></p> <p><b>Automotive Technology II: Automotive Service/  Advanced Transportation Systems Laboratory</b>  <b>3 credits</b>  <b>AUTOLAB2 • 13039710</b></p> <p><b>Course Description:</b> This course includes knowledge of the major automotive systems and the principles of diagnosing and servicing these systems. The course includes applicable safety and environmental rules and regulations. In this course, students will gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study will allow students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach safety, tool identification, proper tool use, and employability.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Describe historical development of the automotive industry</li> <li>• Cover in greater depth the following TEKS:  (c) Knowledge and Skills 5A-M and 7A-F.</li> </ul> <p><b>Instructor Requirement:</b>  Teacher must be ASE Certified in:</p> <ul style="list-style-type: none"> <li>• Suspension &amp; Steering (A4 or T5)</li> <li>• Brakes (A5 or T4)</li> <li>• Electrical/Electronic Systems (A6 or T6)</li> <li>• Engine Performance (A8)</li> <li>• Auto Maintenance and Light Repair (G1)</li> </ul> <p><b>Student Requirement:</b>  Student must pass the student ASE certification, including:</p> <ul style="list-style-type: none"> <li>• Suspension and Steering</li> <li>• Brakes</li> </ul>	<p style="background-color: yellow;"><b>Automotive Suspension and Steering Systems</b>  <b>AUMT 1316 or AUMT 1416</b></p> <p><b>Course Description:</b> Diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures and tire and wheel service. May be taught manufacturer specific.</p> <p><b>End-of-Course Outcomes:</b> Utilize safety procedures; explain operations of suspension and steering systems; diagnose and repair system components, including electronically controlled systems; perform 4-wheel alignment procedures; and perform tire service and repair.</p> <p style="text-align: center;"><b>AND</b></p> <p style="background-color: yellow;"><b>Automotive Brake Systems</b>  <b>AUMT 1310 or AUMT 1410</b></p> <p><b>Course Description:</b> Operation and repair of drum/disc type brake systems. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. May be taught manufacturer specific.</p> <p><b>End-of-Course Outcomes:</b> Utilize safety procedures; explain operation of modern brake systems, diagnose and repair hydraulic systems, drum/disc brake systems, parking brakes, and anti-lock brake systems; machine drums and rotors with current industry standard equipment.</p> <hr style="border: 1px dashed black;"/> <p style="text-align: center;"><b>AND One of the Following Two Courses</b></p> <p><b>Introduction and Theory of Automotive Technology</b>  <b>AUMT 1201 or AUMT 1301</b></p> <p><b>Course Description:</b> An introductory overview of the automotive service industry including history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and automobile maintenance.</p> <p><b>End-of-Course Outcomes:</b> Explain the history of the automobile and career possibilities of the automobile industry; describe safe, professional, and responsible work practices; describe proper use of shop tools and equipment; list the eight Automotive Service Excellence (ASE) vehicle subsystems; and explain the use of service publications; and identify basic automotive maintenance procedures.</p> <p style="text-align: center;"><b>OR</b></p>

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	<p><b>Introduction to Automotive Technology</b> <b>AUMT 1305 or AUMT 1405</b></p> <p><b>Course Description:</b> An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and basic automotive maintenance. May be taught manufacturer specific.</p> <p><b>End-of-Course Outcomes:</b> Utilize appropriate safety procedures; describe historical development and career information of the automotive industry; demonstrate safe, professional, and responsible work practices; demonstrate the proper use of shop equipment and tools; describe the eight Automotive Service Excellence (ASE) vehicle subsystems; use service information; and perform basic automotive maintenance.</p>
<p><b>Diesel Equipment Technology I</b> <b>2 credits</b> <b>DIEQTEC1 • 13040150</b></p> <p><b>Course Description:</b> This course includes knowledge of the function and maintenance of diesel systems. Rapid advances in diesel technology have created new career opportunities and demands in the transportation industry. This course provides the knowledge, skills, and technologies required for employment in transportation systems.</p> <p><b>Instructor Requirement:</b> Teacher must be ASE Certified in:</p> <ul style="list-style-type: none"> <li>• Electrical/Electronic Systems (A6 <b>or</b> T6)</li> <li>• Brakes (A5 <b>or</b> T4)</li> <li>• Engine Performance (A8) <b>OR</b> Diesel Engines (T2)</li> <li>• Suspension and Steering (A4 <b>or</b> T5)</li> <li>• Auto Maintenance and Light Repair (G1) <b>OR</b> Preventative Maintenance Inspection (T8)</li> </ul>	<p><b>Preventative Maintenance</b> <b>DEMR 1229 OR DEMR 1329</b></p> <p><b>Course Description:</b> An introductory course designed to provide the student with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.</p> <p><b>End-of-Course Outcomes:</b> Apply preventative maintenance practices; perform preventative maintenance on systems; and practice appropriate record keeping.</p>

High School Course	College WECM Equivalent
<p><b>Diesel Equipment Technology II</b>  <b>2 credits</b>  <b>DIEQTEC2 • 13040160</b></p> <p><b>OR</b></p> <p><b>Diesel Equipment Technology II/  Advanced Transportation Systems Laboratory</b>  <b>3 credits</b>  <b>DIEQLAB2 • 13040170</b></p> <p><b>Course Description:</b> Diesel Equipment Technology II includes knowledge of the function, diagnosis, and service of diesel equipment systems. Rapid advances in diesel technology have created new career opportunities and demands in the transportation industry. This course provides the advanced knowledge, skills, and technologies required for employment in transportation systems.</p> <p><b>Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Use precision instruments to diagnose and repair basic systems and engines.</li> <li>• Place strong emphasis on TEKS: “perform precision measurements and use published specifications to diagnose component wear and determine necessary repair or replacement.”</li> <li>• Place strong emphasis on TEKS: “determine procedures for the diagnosis, removal, repair, and replacement of engine components such as cylinder heads, engine blocks, timing components, crankshafts, intake and exhaust systems, and ancillary and auxiliary systems.”</li> </ul> <p><b>Required Prerequisite:</b>  Diesel Equipment Technology I</p> <p><b>Instructor Requirement:</b>  Teacher must be ASE Certified in:</p> <ul style="list-style-type: none"> <li>• Electrical/Electronic Systems (A6 or T6)</li> <li>• Engine Performance (A8), Engine Repair (A1), Diesel Engines (T2), <b>OR</b> Light Vehicle Diesel Engine (A9)</li> </ul> <p><b>Required Resources:</b></p> <ul style="list-style-type: none"> <li>• Diesel engines (light duty or industrial)</li> <li>• Current diesel diagnostic equipment</li> </ul>	<p><b>Diesel Engine I</b>  <b>DEMR 1306 or DEMR 1406</b></p> <p><b>Course Description:</b> An introduction to the basic principles of diesel engines and systems.</p> <p><b>End-of-Course Outcomes:</b> Describe the history of diesel engines and diesel systems and their evolution; demonstrate knowledge of the basic principles of diesel systems and engines and how they function; and utilize precision instruments to diagnose and repair basic systems and engines.</p>