



CAREER & TECHNICAL EDUCATION

AGRICULTURE, FOOD & NATURAL RESOURCES
ARCHITECTURE & CONSTRUCTION
ARTS, A/V TECHNOLOGY & COMMUNICATION
BUSINESS, MARKETING & FINANCE
EDUCATION & TRAINING
HEALTH SCIENCE
HOSPITALITY & TOURISM
HUMAN SERVICES
INFORMATION TECHNOLOGY
MANUFACTURING
SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS
TRANSPORTATION, DISTRIBUTION & LOGISTICS
CAREER DEVELOPMENT

About CTE



Career and Technical Education (CTE) provides students with the academic and technical skills, knowledge, and training necessary to succeed in future careers and become lifelong learners. CTE prepares these learners for the world of work by connecting academic content to workplace competencies through introducing new knowledge to students in a hands-on context. Learning becomes relevant for students because they are able to clearly understand why it is important to learn what they are learning and how the knowledge and skill can be applied to their life and work.

Clear Creek Independent School District's CTE program provides students with a foundation for success by offering course sequences of study in a wide range of careers fields. We also provide extracurricular opportunities through student organizations developed to connect likeminded students. They are then able to share their passion for career exploration and the associated knowledge and skills. These organizations promote service-based learning as well as skill development through competitions and activities. They also provide a network of connections with industry partners and the business community.

Our goal is to ensure that students are prepared to succeed in post-secondary education and in a world of work that is increasingly oriented toward highly skilled jobs. We focus on continuous improvement by keeping abreast of current and future trends in business and industry. In essence, Career and Technical Education provides the knowledge and skills students will need to succeed in the modern world and workplace.

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Practicum in **Veterinary Medicine**

Practicum in Veterinary Medicine allows students to work alongside local veterinarians in a veterinary clinic to establish fundamental skills in veterinary medicine. Student interns learn skills such as safe animal handling and restraint, anatomy, physiology, infectious disease identification and treatment, laws and ethics, surgical preparations, as well as office procedures.

CAREERS: Certified Veterinary Assistant, Veterinarian, Zoologist, Animal Trainer



Construction Technology

The Construction Technology program provides a solid foundation for students entering the construction or skilled craft industry by introducing students to engineering principles, technical skills and the business side of construction. Students in the Construction Technology program study carpentry, electrical, plumbing, while also learning to read blueprints, cost estimating, and uses of hand and power tools.

The Construction Technology program is located at Clear Creek High School and is open to all qualified high school students in CCISD.

CAREERS: Construction Manager, Building Inspector, Cost Estimator, Architect

Audio/Video Production

The Audio/Video Production program focuses on pre-production, production and post-production needs of the audio/video industry by obtaining the skills for creating media graphic animations, script writing, camera operation, digital editing, lighting and special effects. Students in the Audio/Video Production program will have the opportunity to participate in the production of their campus-based broadcasts.

CAREERS: Producer, Graphic Designer, Screenwriter, Actor



Practicum in Small Business Management

Practicum in Small Business Management is designed to give students a supervised practical application of the fundamentals of business management, including planning, organizing, inventory control, and marketing products and services. Students will be responsible for the daily operations of the school store on campus and will take leadership roles in financing, human resource management, and inventory management.

CAREERS: Entrepreneur, Brand Manager, Buyer, Market Research Analyst

Teacher Education Training

The Teacher Education Training program fosters student interest in teaching fields ranging from preschool to high school. This program provides students with an opportunity for a field-based internship to job shadow a mentor teacher in all aspects of the teaching profession. Students will plan instructional activities and lessons as well as understand the responsibilities of teachers and all careers related to the education field.

CAREERS: Teacher, Principal, School Counselor, Librarian



Child Guidance

The Child Guidance program further develops student interest in teaching and caring for preschool aged children. This program provides students an opportunity to work in the onsite preschool classroom where they are student teachers of young children. Students will plan age appropriate instructional activities and lessons as well as understand the responsibilities of child care.

CAREERS: Childcare Worker, Child Psychologist, Counselor, Speech and Language Pathologist

Cosmetology

The Cosmetology program provides theory and hands-on practical education designed to prepare students for employment as a licensed cosmetologist. During this 2-year program, students will clock hours to meet the state licensing requirements while learning the necessary skills and training needed for hair design, advanced haircutting practices, application of hair color, nail and skin care, as well as sterilization and sanitation procedures.

The Cosmetology program is located at Clear View High School and is open to all qualified high school students in CCISD.

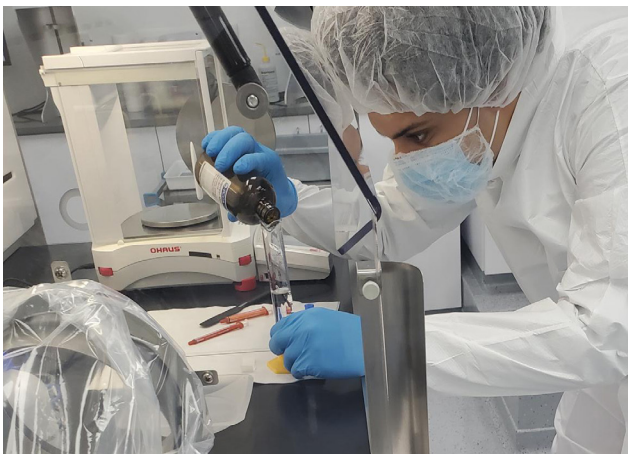
CAREERS: Hair Stylist, Barber, Esthetician, Nail Technician



Pharmacy Technician

The Pharmacy Technician program allows students to work alongside local pharmacists in a variety of pharmacy settings to establish the advanced clinical skills and knowledge needed in the pharmacy industry. Students will learn pharmacy law and ethics, key aspects of medical insurance, pharmaceutical drug classifications and abbreviations, and how to measure the amount of medication needed to fill a prescription.

CAREERS: Pharmacy Technician, Pharmacists, Pharmacologist, Medical Sales Representative



Dentistry

The Dentistry program prepares students for a career in the dental industry by providing students with the skills needed to prepare patients for dental procedures while ensuring the sterility of the dental environment. Students will also become proficient with taking dental x-rays and impressions. Students will learn to assist dentists during procedures by providing tools and materials as well as teach patients about proper oral health care.

The Dentistry program is located at Clear Creek High School and is open to all qualified high school students in CCISD.

CAREERS: Registered Dental Assistant, Dentist, Dental Hygienist, Orthodontist



Biomedical Science

The Biomedical Science program empowers students to explore and find solutions to some of today's most pressing medical challenges. Students step into the roles of biomedical science professionals and investigate topics including human medicine, physiology, genetics, microbiology, and public health. Students work together in teams to find unique solutions, and in the process, learn in-demand, transferable skills like critical thinking and communication.

The Biomedical Science program is located at Clear Lake High School and is open to all qualified high school students in CCISD.

Careers: Biomedical Scientist, Medicinal Chemist, Forensic Scientist, Healthcare Scientist

Certified Nursing Assistant

The Certified Nursing Assistant program provides students with basic healthcare skills needed to be successful in the health care industry as well as prepares students for employment opportunities in long term care facilities, hospitals, and other medical offices. Students develop advanced clinical skills necessary for a career in nursing.

The Certified Nursing Assistant program is located at Clear View High School and is open to all qualified high school students in CCISD.

CAREERS: Medical Assistant, Certified Nursing Assistant, Registered Nurse, Nurse Practitioner



Culinary Arts

The Culinary Arts program provides training for students who are interested in pursuing a career in the food service and hospitality industry. Instruction includes training in the fundamentals of basic food production, nutrition, sanitation, and management services. Additionally, students will develop food preparation skills in a variety of areas such as principles of cooking, sauces, soups, garnishing, baking, pastries and desserts. Students will be responsible for the operation of the school bistro on campus and will take leadership roles in food preparation, marketing, and other aspects of food service.

The Culinary Arts program is located at Clear Springs High School and is open to all qualified high school students in CCISD.

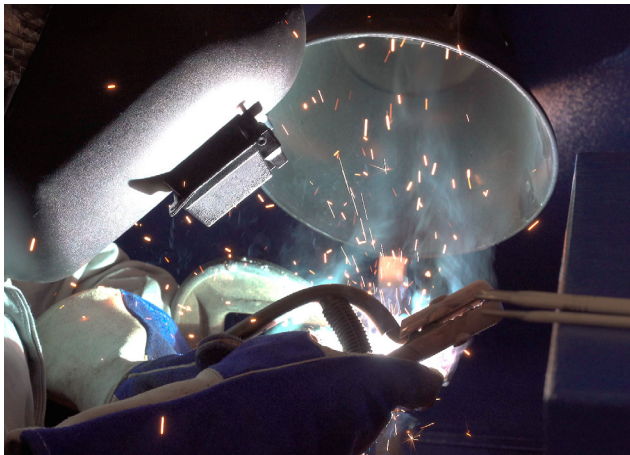
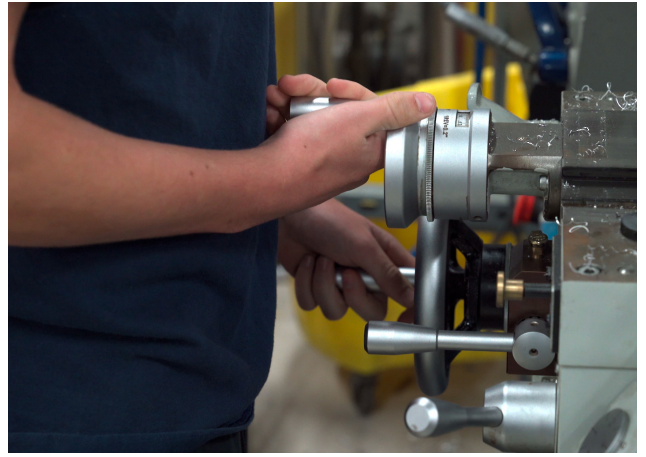
CAREERS: Chef, Food Service Manager, Food Scientist, Caterer

Metal Manufacturing

The Metal Manufacturing program is designed to provide the skills and understanding of the metal technology and machining industry. Students will learn to operate CNC vertical milling machines, CNC lathes, hydraulic shears, hydraulic punch machines, the pneumatic press brake, and a manual mill. The Metal Manufacturing program students also participate in the H.U.N.C.H program (High Schools United with NASA to Create Hardware) where they will work in cooperation with NASA to design, model, and assist in the manufacturing of parts for space.

The Metal Manufacturing program is located at Clear Creek High School and is open to all qualified high school students in CCISD.

CAREERS: Metal Fabricator, Sheet Metal Mechanic, Metal Grinder, Manufacturing Engineer



Welding

The Welding program provides students with the knowledge and application of welding techniques to help start their career in Welding. Students will learn industrial safety, safely operate welding equipment, understand welding joint design, symbols and various welds as well as identify the types of welding joints and positions of welding using shielded metal arch welding.

The Welding program is located at Clear View High School and is open to all qualified high school students in CCISD.

CAREERS: Welder, Welding Inspector, Pipefitter, Sheet Metal Worker

Biotechnology

The Biotechnology program provides an overview of biotechnology and begins preparing students for working in medical, clinical, science, and law enforcement laboratories. Students will learn basic lab methods, including preparation of buffers, sterile techniques, centrifugation, spectrophotometry, autoclaving, and equipment maintenance. Additionally, students will study multiple scientific disciplines, including food science, environmental science, microbiology, health science, and forensics. Students will have the opportunity to participate in a working internship or pursue an individual laboratory project in biotechnology.

The Biotechnology program is located at Clear Falls High School and is open to all qualified high school students in CCISD.

CAREERS: Biochemist, Food Scientist, Microbiologist, Biotechnology Researcher



Computer Technician

The Computer Technician program teaches students the fundamentals of computer technology, preventative maintenance, troubleshooting, and security, as well as the communication skills needed for the IT industry. Students will work on computers and local area networks in a lab setting to gain the knowledge to install, configure, and optimize personal computer hardware and operating systems. Qualified students in the Computer Technician program will have the opportunity to interview for paid student campus technician positions within CCISD as part of the partnership with CCISD's Technology department.

The Computer Technician program is located at Clear Falls High School and Clear Brook High School and is open to all qualified high school students in CCISD.

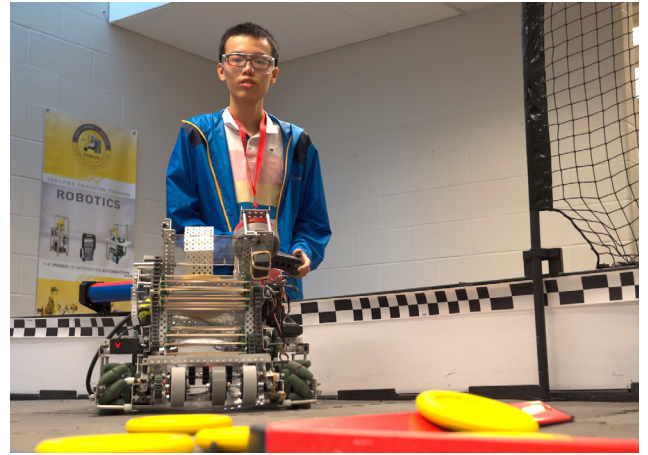
CAREERS: Computer Technician, Computer Software Hardware Engineer, Data Security Analyst, Computer Repair Technician

Robotics

The Robotics program prepares students for a profession in any high demand STEM field. Through implementation of the design process, students will build prototypes or use simulation software to test their designs. Students will work with community partners on robotics projects where they will determine problems or needs, conduct research and design, and test possible robotic solutions. Additionally, students will assemble, wire, and program a collegiate level robot.

The Robotics program is located at Clear Brook High School and is open to all qualified high school students in CCISD.

CAREERS: Robotics Engineer, Software Developer, Computer and Information Research Scientist, Electro-mechanical Technician



Automotive Technology

The Automotive Technology program offers students hands-on training to develop the technical skills needed in the automotive field. Students will receive training in automotive safety, the use of technical manuals, computer diagnostic programs, automotive tools and equipment and performing preventive maintenance such as oil changes, brake inspections and tire rotations. The students will have the opportunity to intern with local automotive businesses and dealerships to gain hands-on work experience while shadowing industry professionals.

The Automotive Technology program is located at Clear Springs High School and is open to all qualified high school students in CCISD.

CAREERS: Automotive Technician, Service Supervisor, Maintenance Technician, Mechanic

Career Preparation

The Career Preparation program provides opportunities for students to participate in a learning experience that combines classroom instruction with a paid business and industry employment experience. Students will learn interview techniques, professional communication skills, and resume portfolio development. Students are required to maintain an approved employed status that matches their individual training plan for continuation in the course.

Independent Study Mentorship

Independent Study Mentorship is a course designed for students ready to study a particular profession. With a mentor and teacher-facilitator, each ISM student creates a unique plan of study and receives individual instruction. Mentors must be located at an off site location. Students leave the high school campus and go to the mentor's place of business to study with professionals. Students in this course must perform at a collegiate or professional level. Students must complete an in-depth study in an area of interest, document three to five hours of work each week, submit weekly logs of documentation, meet with a mentor on a regular basis, present a final project, and follow all school policies and represent Clear Creek Independent School District in a respectful and professional manner.

Agriculture, Food & Natural Resources

The Agriculture, Food & Natural Resources career cluster focuses on the essential elements of life -- food, water, land, and air. This career cluster includes a diverse spectrum of occupations, including farmer, rancher, veterinarian, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

COURSES IN THIS CLUSTER INCLUDE:

- Principles of Agriculture, Food, & Natural Resources
- Small Animal Management
- Professional Standards in Agribusiness
- Wildlife Fisheries & Ecology Management
- Livestock Production
- Veterinary Medical Applications
- Advanced Animal Science
- Floral Design
- Horticulture Science
- Agricultural Mechanics & Metal Technologies
- Agricultural Structures Design & Fabrication
- Ag Structures Design & Fabrication/Lab
- Practicum in Agriculture, Food, & Natural Resources
- Practicum in Veterinary Medicine

Architecture & Construction

The Architecture & Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. These courses provide students with the knowledge to work in several areas including carpentry, plumbing, engineering and building maintenance supervision.

COURSES IN THIS CLUSTER INCLUDE:

- Interior Design
- Principles of Construction (CCHS)
- Construction Technology - Design & Carpentry (CCHS)
- Construction Technology - Architecture & Electrical (CCHS)
- Practicum in Construction Technology (CCHS)

Arts, A/V Technology & Communication

The Arts, A/V Technology & Communication career cluster focuses on careers in designing, producing, writing, and publishing multimedia content. Students will learn to entertain and inform through the world of technology and communications. Careers in this cluster include website designers, producers, video game programmers and multimedia artists.

COURSES IN THIS CLUSTER INCLUDE:

- Audio/Video Production I
- Audio/Video Production II/Lab
- Practicum in Audio/Video Production
- Practicum in Audio/Video Production/Extended
- Animation I
- Animation II
- Fashion Design I
- Fashion Design II
- Graphic Design & Illustration I
- Graphic Design & Illustration II
- Commercial Photography

Business, Marketing & Finance

The Business, Marketing & Finance career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations. Students interested in learning about the economy, private enterprise systems, marketing, advertising and sales can pursue these interests with several course options.

COURSES IN THIS CLUSTER INCLUDE:

- Principles of Business, Marketing, & Finance
- Business Information Management I (Microsoft Office Applications)
- Practicum in Small Business Management I
- Practicum in Small Business Management II
- Accounting I
- Accounting II
- Sports & Entertainment Marketing
- Social Media Marketing
- Entrepreneurship

Education & Training

The Education & Training career cluster focuses on planning, managing, and providing education and training services and related learning support services. Students will study human growth and development and the roles and responsibilities of teachers as well as participate in field-based internships in order to practice what they have learned.

COURSES IN THIS CLUSTER INCLUDE:

- Principles of Education & Training
- Teacher Education Training I
- Teacher Education Training II

Health Science

The Health Science career cluster provides students with a strong foundation of knowledge and skills related to a variety of health careers. Students will experience hands-on-practices for developing skills in medical language, legal and ethical responsibilities, patient care, first aid and CPR.

COURSES IN THIS CLUSTER INCLUDE:

- | | |
|--|---|
| • Principles of Health Science | • Principles of Biomedical Science (Honors/GT) (CLHS) |
| • Medical Terminology | • Human Body Systems (Honors/GT) (CLHS) |
| • Patient Care Technician | • Medical Interventions (Honors/GT) (CLHS) |
| • Pathophysiology | • Biomedical Innovation (Honors/GT) (CLHS) |
| • Anatomy & Physiology | • Certified Nursing Assistant-Practicum |
| • Anatomy & Physiology (Honors/GT) | in Health Science (CVHS) |
| • Dentistry-Practicum in Health Science (CCHS) | • Pharmacy Technician-Practicum in Health Science |

Hospitality & Tourism

The Hospitality & Tourism career cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services. These courses give student opportunities to learn the principles of cooking, serving, and managing restaurants.

COURSES IN THIS CLUSTER INCLUDE:

- Food Science
- Culinary Arts (CSHS)
- Advanced Culinary Arts (CSHS)
- Practicum in Culinary Arts (CSHS)

Human Services

The Human Services career cluster focuses on preparing individuals for employment in career pathways that relate to families, including family, community, personal care and consumer services. Courses in this cluster provide students with skills to build relationships, understand child behaviors, practice money management, and how to set and achieve financial goals.

COURSES IN THIS CLUSTER INCLUDE:

- Dollars & Sense
- Lifetime Nutrition & Wellness
- Interpersonal Studies
- Child Development
- Child Guidance I
- Child Guidance II
- Cosmetology I (CVHS)
- Cosmetology II (CVHS)

Information Technology

The Information Technology career cluster exposes students to multiple types of computer technology. Students have the opportunity to learn about several common multimedia applications including computer programming, digital media, and computer maintenance. Information technology courses are designed to prepare students to become successful IT professionals.

COURSES IN THIS CLUSTER INCLUDE:

- Digital Media
- Computer Maintenance (CBHS and CFHS)
- Computer Maintenance/Lab (CBHS and CFHS)
- Computer Technician (CBHS and CFHS)
- Practicum in Computer Technician (CBHS and CFHS)

Manufacturing

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products. Students learn to operate CNC mills and lathes, hydraulic shears and punch machines as well as pneumatic press brakes and manual mills. Welding instruction includes learning the basics of tungsten arc welding (TIG), gas metal arc welding (MIG) and shielded metal arc welding (Stick).

COURSES IN THIS CLUSTER INCLUDE:

- Principles of Manufacturing (CCHS)
- Precision Metal Manufacturing I (CCHS)
- Precision Metal Manufacturing II (CCHS)
- Welding I (CVHS)
- Welding II (CVHS)

Science, Technology, Engineering & Mathematics

The Science, Technology, Engineering & Mathematics career cluster focuses on technology innovation and problem solving in the 21st century. Courses in this cluster give students the opportunities to study the technology used in biology, agriculture, medicine, and telecommunications. Additionally, students can study a variety of engineering fields through the Project Lead the Way curriculum program.

COURSES IN THIS CLUSTER INCLUDE:

- | | |
|--|---|
| • Introduction to Engineering Design (Honors/GT) | • Cybersecurity (Honors/GT) |
| • Engineering Science (Honors/GT) | • Independent Study: Computer Science (Honors/GT) |
| • Digital Electronics (Honors/GT) | • Forensic Science |
| • Civil Engineering and Architecture (Honors/GT) | • Biotechnology I (Honors/GT) (CFHS) |
| • Aerospace Engineering (Honors/GT) | • Biotechnology II (Honors/GT) (CFHS) |
| • Engineering Design & Development | • Practicum in Biotechnology (CFHS) |
| • Game Programming & Design | • Biotechnology Independent Study (CFHS) |
| • Fundamentals of Computer Science | • Robotics I (Honors/GT) (CBHS) |
| • Computer Science Principles (AP/GT) | • Practicum in Robotics (Honors/GT) (CBHS) |
| • Computer Science A (AP/GT) | |

Transportation, Distribution & Logistics

The Transportation, Distribution & Logistics career cluster prepares students for the automotive industry through the development of technical and communication skills needed to be successful in the field of automotive repair. Internships in the automotive repair facilities, alongside highly trained professionals, are available through partnerships with local businesses to allow students an opportunity to demonstrate what they have learned.

COURSES IN THIS CLUSTER INCLUDE:

- Automotive Technology I (CSHS)
- Automotive Technology II (CSHS)
- Practicum in Transportation Systems (CSHS)

Student Organizations

DECA – Business and Marketing

Prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe.

FCCLA – Family and Consumer Science

Family and community is the central focus of this organization. Members learn important life skills such as leadership, planning, problem solving, decision-making, and interpersonal communication.

FFA – Agriculture Science

The premier youth organization preparing members for leadership and careers in the science, business and technology of agriculture.

HOSA – Health Science

Empowers future healthcare professionals to become leaders in the global health community through education, collaboration, and experience.

NTHS – National Technical Honor Society

Honors the achievements of top CTE students, provides scholarships to encourage the pursuit of higher education, and cultivates excellence in today's highly competitive, skilled workforce.

Robotics – STEM

Combines the excitement of sport with the rigors of science and technology. Students gather to study a branch of engineering that includes mechanical, electronic, information technology, computer science, and many others.

SkillsUSA – Technical Skill Development

A partnership of students, teachers and industry working together to ensure the development of a skilled workforce. This organization includes a diverse array of highly skilled professions.

TAFE – Texas Association of Future Educators

Encourages students to learn about careers in education and assists them in exploring the teaching profession while promoting character, service, and leadership skills necessary for becoming effective educators.

CAREER CLUSTER	COURSE	CBHS	CCHS	CFHS	CLHS	CSHS	CVHS
Agriculture, Food & Natural Resources	Practicum in Agriculture, Food & Natural Resources	●	●	●	●	●	
	Practicum in Veterinary Medicine	●	●	●	●	●	
Architecture & Construction	Principles of Construction		★				
	Construction Technology - Design & Carpentry		★				
	Construction Technology - Architecture & Electrical		★				
	Practicum in Construction Technology		★				
Arts, A/V Technology & Communications	Audio/Video Production II	●	●	●	●	●	●
	Practicum in Audio/Video Production/Extended	●	●	●	●	●	●
Business, Marketing & Finance	Practicum in Small Business Management I	●	●	●	●	●	
	Practicum in Small Business Management II	●	●	●	●	●	
Education & Training	Teacher Education Training I	●	●	●	●	●	
	Teacher Education Training II	●	●	●	●	●	
Health Science	Dentistry		★				
	Principles of Biomedical Science (Adv Acad)				★		
	Human Body Systems (Adv Acad)				★		
	Medical Interventions (Adv Acad)				★		
	Biomedical Innovation (Adv Acad)				★		
	Certified Nursing Assistant						★
	Pharmacy Technician	●	●	●	●	●	
Hospitality & Tourism	Culinary Arts					★	
	Advanced Culinary Arts					★	
	Practicum in Culinary Arts					★	
Human Services	Child Guidance I	●	●	●			
	Child Guidance II	●	●	●			
	Cosmetology I						★
	Cosmetology II						★
Information Technology	Computer Maintenance	★		★			
	Computer Maintenance Lab	★		★			
	Computer Technician	★		★			
	Practicum in Computer Technician	★		★			
Manufacturing	Principles of Manufacturing		★				
	Precision Metal Manufacturing I		★				
	Precision Metal Manufacturing II		★				
	Welding I						★
	Welding II						★
Science, Technology, Engineering & Mathematics	Biotechnology I (Adv Acad)			★			
	Biotechnology II (Adv Acad)			★			
	Practicum in Biotechnology			★			
	Biotechnology ISM (Adv Acad)			★			
	Robotics I (Adv Acad)	★					
	Practicum in Robotics (Adv Acad)	★					
Transportation, Distribution & Logistics	Automotive Technology I					★	
	Automotive Technology II					★	
	Practicum in Transportation Systems					★	
Career Development	Career Preparation I	●	●	●	●	●	●
	Career Preparation I Extended	●	●	●	●	●	●
	Career Preparation II	●	●	●	●	●	●
	Career Preparation II Extended	●	●	●	●	●	●
	Independent Study Mentorship (Adv Acad)	●	●	●	●	●	●



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