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CAREER & TECHNOLOGY CENTER

At Miller Career & Technology Center,
we develop college- and career-ready students
through engaging, real-world experiences.

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FREQUENTLY ASKED QUESTIONS

WHAT IS MILLER CAREER & TECHNOLOGY CENTER?

Miller Career & Technology Center (MCTC) serves as a central site for specialty Career & Technical Education (CTE) courses that are not offered at the student's home campus. Our CTE courses specialize in trades, applied sciences, technologies and career preparation.

WHAT ARE THE BENEFITS OF TAKING A CTE COURSE AT MCTC?

Our courses provide an opportunity to gain a certification, industry credentials, or field experience. The course work may provide job opportunities as well as introduce students to industry standards in a specific career.

HOW MUCH DOES IT COST TO ATTEND MCTC?

There is no tuition, however, some programs require a fee for supplies and/or a uniform. Details will be shared at MCTC's Spring Orientation for students who will be enrolled for the following school year.

WILL I EARN CREDIT FOR COURSES TAKEN AT MCTC?

Students who successfully complete a CTE course at MCTC will earn elective credits. The number of credits received are dependent upon the program a student is enrolled in. The total amount of credits awarded for each program is available on the MCTC website as well as SchooLinks.

WHAT IS A PREREQUISITE AND WHERE ARE THEY OFFERED?

A prerequisite is an introductory course that must be successfully completed before a student is eligible for an advanced level course. Several MCTC courses require a prerequisite as part of eligibility. All prerequisites must be successfully completed before advancing to the next course in the sequence. Please refer to the MCTC course catalog for required prerequisites.

FREQUENTLY ASKED QUESTIONS

HOW DOES SCHEDULING WORK AT MCTC?

Students attend part of the day at their home campuses and part of the day at MCTC. Our counselor and your home campus counselor will attempt to create a schedule incorporating all of your requests.

WILL I BE ABLE TO TAKE EXTRA-CURRICULAR ACTIVITIES SUCH AS SPORTS, MUSIC, ETC.?

In most cases, the counselor will work with your schedule so you can attend MCTC and participate in extra-curricular activities.

IS MCTC AVAILABLE TO ALL STUDENTS?

Our courses are for Katy ISD students classified as juniors or seniors. Courses on our campus have limited enrollment. If demand exceeds the maximum allowed enrollment, students' acceptance into a course may be determined by the following factors: unexcused absences, discipline, and official GPA. Decisions as to whether a particular course will be taught are based upon the number of students requesting the course and availability of personnel.

WHEN DOES COURSE ENROLLMENT OPEN AND HOW DO I REQUEST A MCTC COURSE?

The Power School course enrollment link opens following Winter break. During course selection time, sophomores and juniors may request a course to take during their junior or senior year. Students will request a MCTC course online through Power School. The link can be found on the MCTC website, the Miller Course Request tile in MyKaty Cloud, and on your Home Access Center page. Students will not request the course through their home campus course

HOW DO I GET TO/FROM MCTC?

Bus transportation is available for MCTC students, or students may provide their own transportation. Students enrolled in our morning classes are picked up from a designated neighborhood pickup point and transported to our campus. Students will not be picked up from their home campuses to attend MCTC in the morning. After the morning classes are dismissed, transportation is provided to home campuses. Students enrolled in afternoon MCTC classes will be transported from home campuses to Miller and then transported to a designated drop-off point in their neighborhood upon dismissal.

VETERINARY MEDICINE

CAREER CLUSTER: AGRICULTURE, FOOD & NATURAL RESOURCES

STATEWIDE PROGRAM OF STUDY: ANIMAL SCIENCE

Course	Credits	Class Periods	Grade	Location
Principles of Agriculture*†	1.0	1	9-10	Home Campus
Equine Science*† AND Small Animal Management*†	.5 .5	1	10-12	Home Campus
Veterinary Medical Applications *Prerequisites: Principles of Agriculture*† and Equine Science*† and Small Animal Management*†* **Students in the Class of 2026 need only ONE of the following: Equine Science or Small Animal Management or Livestock Production.* *†Students in the Class of 2027 and beyond who have only taken one or two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.*	2.0	2	11-12	MCTC
Veterinary Assisting *Prerequisite: Veterinary Medical Applications*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Elanco Fundamentals of Veterinary Medicine
- Certified Veterinary Assistant (CVA) offered by the Texas Veterinary Medical Association

8147V VETERINARY MEDICAL APPLICATIONS

Grades: 11-12 2 Credits

Prerequisite: Principles of Agriculture† and Equine Science*† and Small Animal Management*†*

**Students in the Class of 2026 need only ONE of the following: Equine Science or Small Animal Management or Livestock Production*

†Students in the Class of 2027 and beyond who have only taken one or two of the three perquisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

—

This course provides an introduction to animal care, including handling, health, safety, sanitation, surgical preparation, anatomy and physiology, and medical terminology. Students learn basic skills necessary to begin work in a veterinary clinic. They will interact with live animals, with the intent to analyze behavior and apply proper restraint and handling techniques.

8148V VETERINARY ASSISTING

Grade: 12 2 Credits

Prerequisite: Veterinary Medical Applications

Students must have a valid driver's license and obtain a Miller parking permit by the third day of school to remain eligible.

—

This course provides advanced application of previously learned knowledge and skills from Veterinary Medical Applications. Students participate in an internship at a veterinary clinic, animal shelter, or other animal facility where they will gain further industry experience. Students may acquire hours needed to obtain CVA certification. The additional 300 hours must be supervised by a Doctor of Veterinary Medicine (DVM) or Licensed Veterinary Technician (LVT) and completed within one calendar year of taking the CVA exam.

PROGRAM EXPERIENCES

Students interested in the animal science field have the opportunity to gain knowledge and experience caring for a variety of animal breeds. They will learn proper medical terminology and safety and sanitation standards.

During lab time, students practice various handling and restraint techniques on real animals, as well as how to take vitals, and grooming procedures. Lab activities also include dissecting and labeling organs and how to take and analyze fecal, urine and blood samples. During their 2nd year, students have the opportunity to participate in a nonpaid internship at either a vet clinic or animal shelter.

On Fridays, the Dog Wash at Miller is open to the public to bring in their dogs to be groomed by both 1st and 2nd year students for a small fee. This gives all of our students another chance at hands-on experience.

EXPECTATIONS OF STUDENTS

- Motivated to learn scientific view of animals from both the laboratory and veterinary assistant perspective
- Willing to work with all types of animals
- Willingness to handle live animals, blood, feces, and urine
- A desire to learn technical information for assisting veterinarians
- Demonstrate professionalism while at internship site

CAREER POSSIBILITIES

- Animal Trainer
- Breed Analyst
- Companion Animal Therapy Specialist
- Veterinarian
- Veterinary Assistant
- Veterinary Technician
- Zoologist

ARCHITECTURAL DESIGN

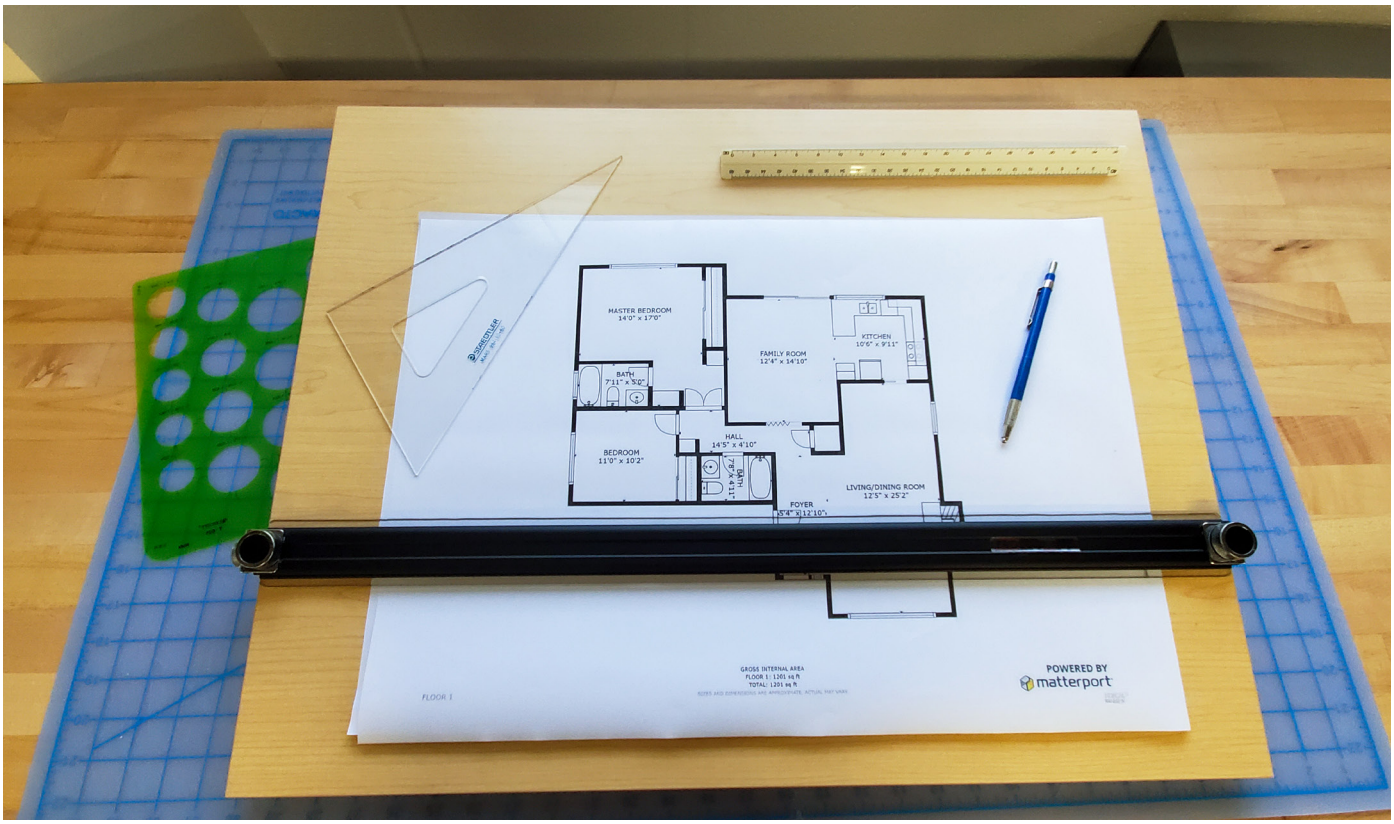
CAREER CLUSTER: ARCHITECTURE & CONSTRUCTION

STATEWIDE PROGRAM OF STUDY: ARCHITECTURAL DRAFTING & DESIGN

Course	Credits	Class Periods	Grade	Location
Architectural Design I	1.0	1	10-12	Home Campus
Architectural Design II *Prerequisites: Architectural Design I and Geometry*	2.0	2	11-12	MCTC
Practicum in Architectural Design *Prerequisite: Architectural Design II*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Auto Desk Certified User
- Auto Desk Associate Revit



8030V ARCHITECTURAL DESIGN II

Grades: 11-12 2 Credits
Prerequisite: Architectural Design I and Geometry
—
This course provides an understanding of the architectural process including project research/programming, conceptual and schematic design, design development and material selection. Students will learn the fundamentals of design history, techniques and tools related to presentation and production drawings, renderings, and scaled models for residential architecture.

8001V PRACTICUM IN ARCHITECTURAL DESIGN

Grade: 12 2 Credits
Prerequisite: Architectural Design II
—
This course builds upon architectural design foundations and increases understanding of the overall process in a classroom and workplace environment. Major emphasis is placed on projects as they relate to the business world, including its process, key definitions, budgets, schedules, and presentations. Projects are team-based involving cross-functional disciplines (engineering, project management) to derive cohesive solutions. Students may have the opportunity to gain field experience through field trips, guest speakers and job shadowing.

PROGRAM EXPERIENCES

Course experiences focus on real-life applications of architecture, both in lesson content and project work.

MCTC provides a fun but realistic familiarity for students with the requirements, time commitment, and dedication it takes to pursue a career in architecture.

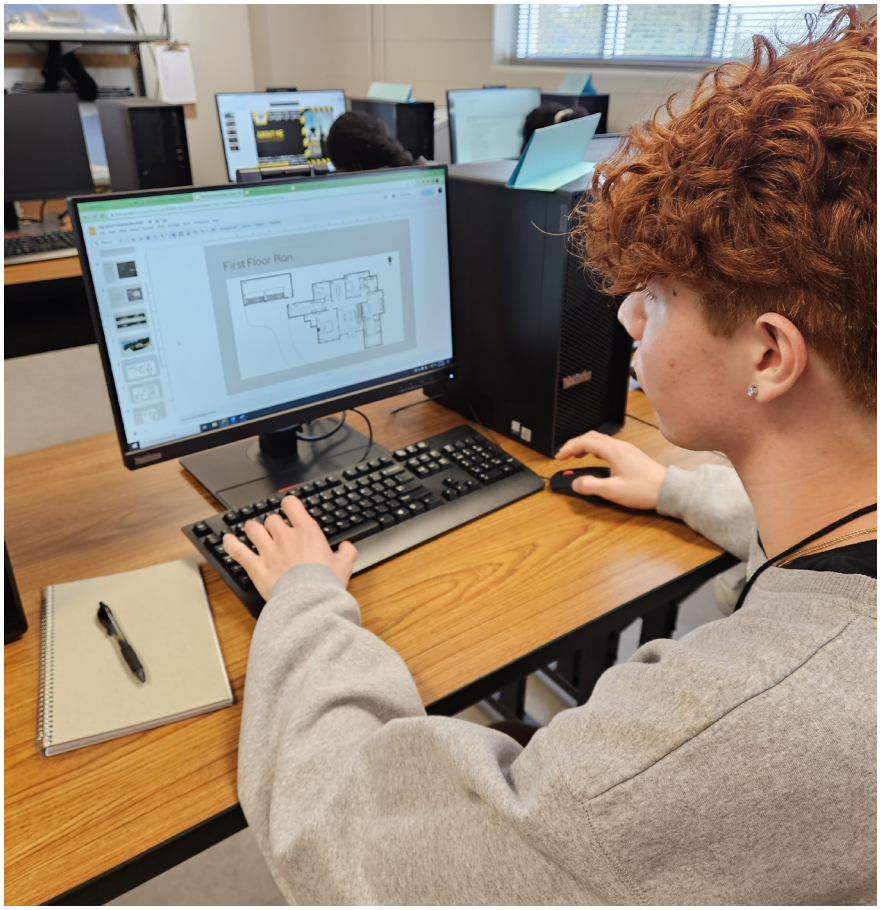
Once these courses are completed, students should be able to make a sound and educated decision regarding their future careers in this industry.

CAREER POSSIBILITIES

- Building Code Writer
- Civil Engineer
- Full-Building Designer
- Historical Preservationist
- Interior Designer
- Project Manager
- Structural Engineer

EXPECTATIONS OF STUDENTS

- Maintain self-motivation
- Demonstrate the ability to be a flexible team player
- Demonstrate excellent verbal and written communication skills
- Exhibit a willingness to share creative ideas



CONSTRUCTION TRADES

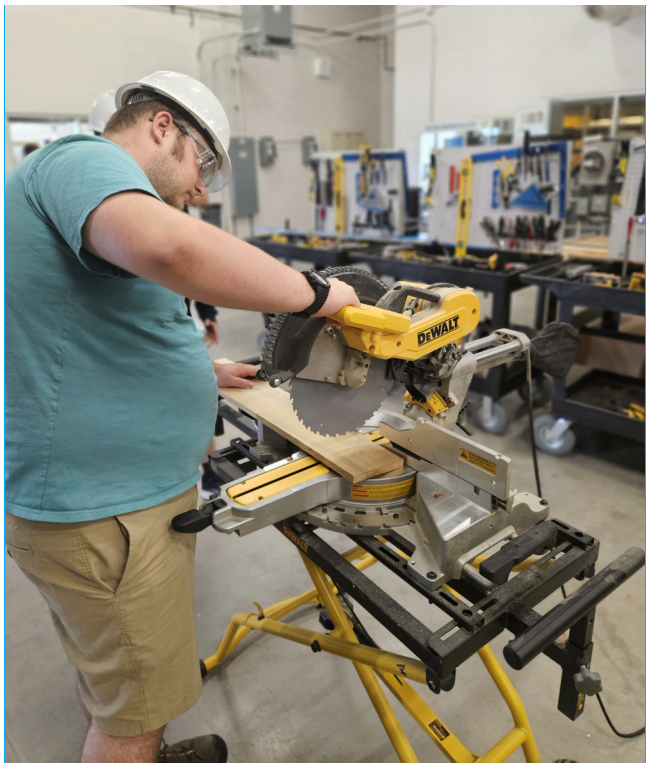
CAREER CLUSTER: ARCHITECTURE & CONSTRUCTION

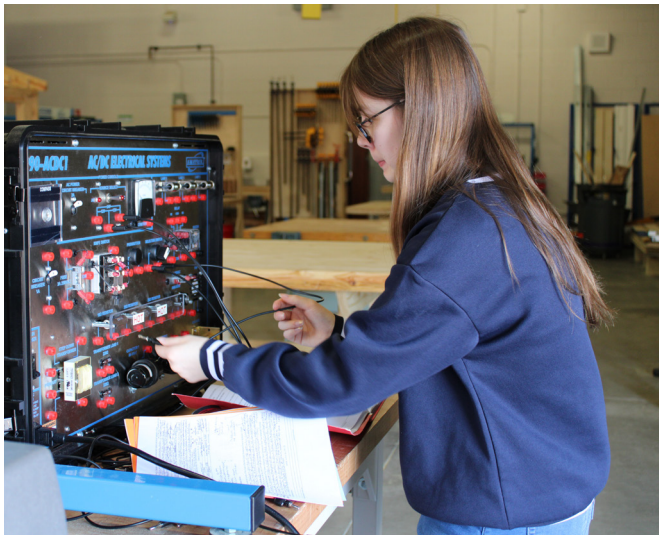
STATEWIDE PROGRAM OF STUDY: CONSTRUCTION MANAGEMENT & INSPECTION

Course	Credits	Class Periods	Grade	Location
Principles of Construction & Construction Trades I	3.0	2	11-12	MCTC
Construction Trades II *Prerequisites: Principles of Construction and Construction Trades I*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- National Center for Construction Education and Research (NCCER) Core Certification
- EPA 608 Refrigerant Handling License





PROGRAM EXPERIENCES

These courses provide a unique opportunity to explore diverse careers within the construction industry, giving students insights into potential paths for their future. Beyond the toolbox, construction courses teach teamwork, problem-solving, and safety practices, fostering qualities that extend well beyond construction sites and into any career choice.

By engaging in real-world projects, students not only apply academic concepts but also develop a strong work ethic and attention to detail, laying the groundwork for success in various fields. Whether planning to enter the workforce directly or pursue further education, a construction course in high school equips students with skills, knowledge, and a practical mindset that will serve them well.

8024V PRINCIPLES OF CONSTRUCTION

Grades: 11-12 **1 Credit** - *taken concurrently with Construction Trades I*

8192V CONSTRUCTION TRADES I

Grades: 11-12 **2 Credits** - *taken concurrently with Principles of Construction*

—

Principles of Construction provides an introduction for students entering the construction industry. Students will gain knowledge of construction safety, construction mathematics, and common hand and power tools. **Construction Trades I** provides skills needed for the building maintenance industry as a technician or supervisor. Students will acquire knowledge and skills in plumbing, electrical, and heating, ventilation, and air conditioning (HVAC) systems. They will learn methods for repair and installation of drywall, roofing, and insulation systems.

8196V CONSTRUCTION TRADES II

Grade: 12 **2 Credits**

Prerequisites: Principles of Construction and Construction Trades I

—

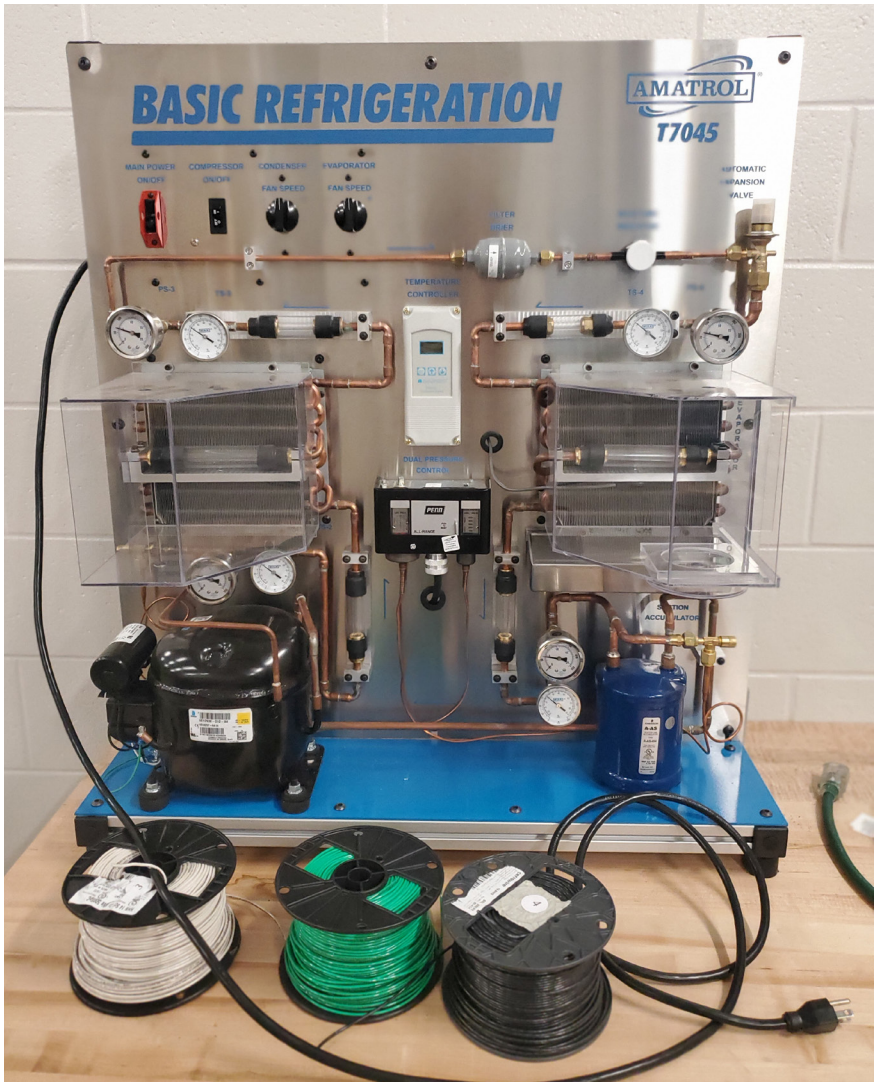
This course builds on previously learned skills needed to enter the construction workforce as a building maintenance technician, supervisor, or construction project manager. Through hands-on experience, students will gain further knowledge in Occupational Safety and Health Administration (OSHA) standards, safety devices in electrical circuits, and maintenance of electrical heating, ventilation, and air conditioning (HVAC), and plumbing systems.

CAREER POSSIBILITIES

- Building Inspector
- Carpenter
- Construction Manager
- Electrician
- HVAC Technician
- Painter
- Plumber
- Project Manager

EXPECTATIONS OF STUDENTS

- Work both independently and as a team to complete projects.
- Display professional behavior in the classroom and the Construction lab area.
- Show willingness to learn theory before going into the Construction lab area for hands-on training.
- Pass multiple safety tests before entering the lab area.



DIGITAL AUDIO

CAREER CLUSTER: ARTS, A/V TECHNOLOGY & COMMUNICATIONS

STATEWIDE PROGRAM OF STUDY: DIGITAL COMMUNICATION

Course	Credits	Class Periods	Grade	Location
Digital Audio I & II	2.0	2	11-12	MCTC
Practicum in Digital Audio *Prerequisites: Digital Audio I & II*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Dante Level 1
- NOCTI Audio Visual Communications Certification

8027V DIGITAL AUDIO I - FALL SEMESTER

8028V DIGITAL AUDIO II - SPRING SEMESTER

Grades: 11-12 1 Credit Each Course

—

This course provides an introduction to the digital audio industry. Students explore audio careers in the areas of music production, live sound, film production, animation, game design, radio, and television. Using Digital Audio Work Stations (DAWS) such as ProTools for recording and mixing, students will develop an understanding of the industry with a technical emphasis on production and critical listening skills.

8682V PRACTICUM IN DIGITAL AUDIO

Grade: 12 2 Credits

Prerequisites: Digital Audio I & Digital Audio II

—

This course provides Advanced application of previously learned knowledge and skills. Students will develop a deeper understanding of the audio industry with a focus on industry pathways such as live sound, broadcast, streaming, podcasting, studio recording, and audio for film, video, and games.
Students will continue to build their resumes and demo reels.

EXPECTATIONS OF STUDENTS

- Work on projects both independently and in a group setting.
- Exhibit professional behavior in both the classroom and studio.
- Show willingness to learn theory before lab time in studio.
- Motivated to learn audio equipment operation.

CAREER POSSIBILITIES

- Audio Engineer
- Audio Forensic Technician
- Broadcaster
- Gaming Audio Engineer
- Installation & Design Engineer
- Live Sound Engineer
- Mixing Engineer
- Audio Post-Production Specialist
- Producer

PROGRAM EXPERIENCES

Students develop knowledge of the audio recording process including production, tracking, mixing, and mastering. In addition to music recording, the class will also explore post production sound for film, television, and video games as well as live sound for concerts and sporting events.

Students receive hands-on experience while working on industry standard equipment and software.

FILM

CAREER CLUSTER: ARTS, A/V TECHNOLOGY & COMMUNICATIONS

STATEWIDE PROGRAM OF STUDY: DIGITAL COMMUNICATION

Course	Credits	Class Periods	Grade	Location
Principles of Arts A/V & Communication OR Digital Communication in the 21st Century *Prerequisite: Principles of Arts A/V & Communication* OR Audio Video Production *Prerequisites: Principles of Arts A/V & Communication and Digital Communication in the 21st Century*	1.0 1.0 1.0	1 1 1	7-12 9-12 10-12	Home Campus Home Campus Home Campus
Film 1 – Advanced A/V Production *Prerequisite: Principles of Arts A/V & Communication or Digital Communication in the 21st Century or Audio/Video Production*	2.0	2	11-12	MCTC
Film 2 – Practicum of A/V Production *Prerequisite: Film I – Advanced A/V Production*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Adobe Premiere Pro
- Adobe After Effects

CAREER POSSIBILITIES

- Director
- Editor
- Producer
- Replay Technician
- Storyboard Artist
- Writer

8005V FILM I- ADVANCED AUDIO/VIDEO PRODUCTION

Grades: 11-12 2 Credits

Prerequisite: Principles of Arts A/V or Digital Communication in the 21st Century or Audio Video Production I

—

This course provides advanced training for employment in the film and video/television production industry. Students further explore the three production stages, including script writing, making shot lists, camera techniques, operation of different types of production equipment and linear editing methods using Adobe Premiere.

8035V FILM II: PRACTICUM IN AUDIO/VIDEO PRODUCTION

Grade: 12 2 Credits

Prerequisite: Film I

—

This course provides advanced application of previously learned knowledge and skills. Students receive instruction in the operation of higher-end cameras, mastery of media graphics, linear editing, color correction, audio techniques, lighting, script writing, direction, production, special effects, signal control and managing equipment.

PROGRAM EXPERIENCES

With the world leaning on technology more often than not, it is critical to be a step ahead of others in the industry in order to stay competitive.

Our Film courses provide students with both college and industry level knowledge so that they are prepared for post-secondary opportunities.

The hands-on lab time provided for students during class will teach current standards using industry-level software.

EXPECTATIONS OF STUDENTS

- Ability to work on projects both independently and in a group setting.
- Exhibit professional behavior in both the classroom and studio.
- Show willingness to learn theory before lab time in studio.
- Demonstrate excellent communication skills.

CULINARY ARTS

CAREER CLUSTER: HOSPITALITY & TOURISM

STATEWIDE PROGRAM OF STUDY: CULINARY ARTS

Course	Credits	Class Periods	Grade	Location
Culinary Arts & Foundations of Restaurant Management	3.0	2	11-12	MCTC
Practicum in Culinary Arts *Prerequisites: Culinary Arts and Foundations of Restaurant Management*	2.0	2	12	MCTC

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CERTIFICATION OPPORTUNITY

- ServeSafe® Manager Certification

EXPECTATIONS OF STUDENTS

- Ability to work on projects both independently and in a group setting.
- Exhibit professional behavior in both the classroom and studio.
- Show willingness to learn theory before lab time in studio.
- Demonstrate excellent communication skills.

CAREER POSSIBILITIES

- Executive Chef
- Nutritionist
- Pastry Chef
- Personal Health Coach
- Restaurant Owner
- Sous Chef

8371V CULINARY ARTS

Grades: 11-12 2 Credits - *taken concurrently with Foundations of Restaurant Management*

8364V FOUNDATIONS OF RESTAURANT MANAGEMENT

Grades: 11-12 1 Credit - *taken concurrently with Culinary Arts*

—

This course provides an introduction to and overview of the culinary industry. Students learn knife skills, industry-specific vocabulary, and experience hands-on labs in all areas of food production using commercial kitchen equipment. Students also learn skills for restaurant management and service.

8373V PRACTICUM IN CULINARY ARTS

Grade: 12 2 Credits

Prerequisites: Culinary Arts and Foundations of Restaurant Management

—

This course provides a more in-depth application of previously learned knowledge and skills. Students learn to produce more complex dishes appropriate for restaurant service at the on-site bistro and for competition. The Old Town Bistro is run by practicum students and is open to the public for dining and catering services.

PROGRAM EXPERIENCES

After being taught safety and sanitation procedures for handling food and kitchen equipment, students participate in hands-on labs in all areas of food production using commercial grade kitchen equipment. Skills they will learn include basic knife handling and chopping, sautéing, baking, grilling, and plate presentation.

Second year students will have the opportunity to experience working in a real-world culinary setting, as they assist in running our onsite restaurant, Old Town Bistro, our catering service, and our quick service counter.

They will rotate through each position including serving, cooking, hosting and supervising, and are able to practice all the skills acquired during class and lab time.

COMPUTER TECHNICIAN

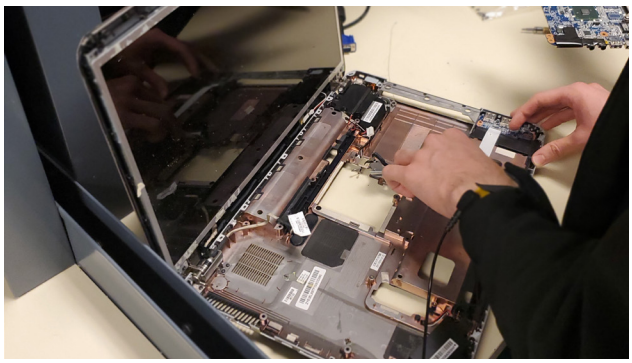
CAREER CLUSTER: INFORMATION TECHNOLOGY

STATEWIDE PROGRAM OF STUDY: INFORMATION TECHNOLOGY SUPPORT & SERVICES

Course	Credits	Class Periods	Grade	Location
Principles of Information Technology* OR Introduction to Computer Science* OR Computer Science I* *Prerequisite: Algebra I* OR AP Computer Science Principles* *Prerequisite: Algebra I* OR AP Computer Science A* *Prerequisite: Algebra I* *Successful completion of this course awards one advanced math credit and one language other than English credit*	1.0 1.0 1.0 1.0 1.0	1 1 1 1 1	8 9-12 9-12 9-12 9-12	Junior High Home Campus Home Campus Home Campus Home Campus
Computer Technician *Prerequisite: Principles of Information Technology* or Introduction to Computer Science* or Computer Science I* or AP Computer Science Principles* or AP Computer Science A** ** The Class of 2026 is waived from the prerequisite requirement for Computer Technician.*	2.0	2	11-12	MCTC
Practicum in Computer Technician *Prerequisite: Computer Technician*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- CompTIA IT Fundamentals
- CompTIA A+



8664V COMPUTER TECHNICIAN

Grades: 11-12 2 Credits

Prerequisite: Principles of Information Technology or Introduction to Computer Science* or Computer Science I* or AP Computer Science Principles* or AP Computer Science A**

**The Classes of 2026 is waived from the prerequisite requirement for Computer Technician.*

—

This course provides an introduction to basic computer hardware and software. Through hands-on labs, students learn how to build computer systems, troubleshoot and repair computers, printers and mobile devices, install and configure operating systems (Windows and Linux), and learn networking and security concepts.

8688V PRACTICUM IN COMPUTER TECHNICIAN

Grade: 12 2 Credits

Prerequisite: Computer Technician

—

This practicum provides students with practical, real-world experience in the field of computer technology. Building on foundational knowledge of hardware, software, and networking, students will apply their skills in diagnosing, troubleshooting, and repairing computer systems, printers, and mobile devices. The course emphasizes hands-on learning in professional environments, allowing students to install and configure operating systems, implement security measures, and perform routine maintenance under the supervision of experienced technicians. By the end of the practicum, students will gain confidence and proficiency in addressing technical challenges and supporting IT operations in diverse workplace settings.

PROGRAM EXPERIENCES

Students have the opportunity to gain the most up-to-date knowledge through both classroom instruction and hands-on experience. During lab time they will have numerous projects to sharpen their IT abilities, such as disassembling and reassembling computers to learn the internal components, how they connect with cabling, and how they are installed.

All the skills learned throughout this course will provide students with insight into various areas of the IT field as well as potential post-secondary job options available within the industry.

CAREER POSSIBILITIES

- Computer Hardware Engineer
- Computer System Analyst
- Database Administrator
- Field Service Technician

EXPECTATIONS OF STUDENTS

- Ability to work both independently and in a group.
- Ability to engage in labs and critical thinking.
- Ability to acquire working knowledge of computer systems and desktop support.

CISCO NETWORK ENGINEERING

CAREER CLUSTER: INFORMATION TECHNOLOGY

STATEWIDE PROGRAM OF STUDY: NETWORKING SYSTEMS

Course	Credits	Class Periods	Grade	Location
Principles of Information Technology* OR Introduction to Computer Science* OR Computer Science I* OR AP Computer Science Principles* *Prerequisite: Algebra I* OR AP Computer Science A* *Prerequisite: Algebra I* *Successful completion of this course awards one advanced math credit and one language other than English credit*	1.0 1.0 1.0 1.0 1.0	1 1 1 1 1	8 9-12 9-12 9-12 9-12	Junior High Home Campus Home Campus Home Campus Home Campus
Network Engineering I *Prerequisite: Principles of Information Technology* or Intro to Computer Science* or Computer Science I* or AP Computer Science Principles* or AP Computer Science A* or Computer Technician** **The Class of 2026 is waived from the prerequisite requirement for Network Engineering.* *Note: Students must have completed Algebra II or be concurrently enrolled in Algebra II*	2.0	2	11-12	MCTC
Network Engineering II *Prerequisite: Network Engineering I*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITY

- Cisco Certified Network Associate (CCNA) Certification

8685V CISCO NETWORK ENGINEERING I

Grades: 11-12 2 Credits

Prerequisites: Algebra II or concurrent enrollment in Algebra II AND Principles of Information Technology or Introduction to Computer Science* or Computer Science I* or AP Computer Science Principles* or AP Computer Science A* or Computer Technician**
**The Class of 2026 is waived from the prerequisite requirement for Cisco Network Engineering I, with the exception of Algebra II.*

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This course provides an introduction to the basics of computer networking. Students focus on network architecture, function, theory, and design. Students build networks using enterprise-level Cisco equipment and learn hands-on job skills, including network configuration and troubleshooting. By the end of the course, students will be able to design and build LANs, configure enterprise routers and switches, and implement IP addressing schemes.

8686V CISCO NETWORK ENGINEERING II

Grade: 12 2 Credits

Prerequisite: Network Engineering I

—

This course focuses on advanced network engineering concepts used to support large-scale enterprise networks that are commonly found in the industry today. It is designed to prepare students to sit for Cisco's CCNA certification exam. Students learn advanced routing and switching concepts, wireless essentials, and network security automation. They troubleshoot routers and switches and learn to resolve common issues.

PROGRAM EXPERIENCES

This class is designed to prepare students for entry-level work in network engineering. It lays the foundation for not only networking, but also IT specialties such as cyber security.

Students learn how to build and maintain the enterprise level networks that companies large and small rely on. The knowledge and experience gained in this class can lead to an early start to a career in IT.

CAREER POSSIBILITIES

- Chief Information Officer
- IT Manager
- Network Engineer
- Cloud Computing Specialist
- Systems Administrator

EXPECTATIONS OF STUDENTS

- Willingness to engage in lectures and labs to practice knowledge gained.
- Ability to acquire basic understanding of how networks function.
- Ability to work independently on the computer.

CYBER SECURITY

CAREER CLUSTER: INFORMATION TECHNOLOGY

STATEWIDE PROGRAM OF STUDY: CYBER SECURITY

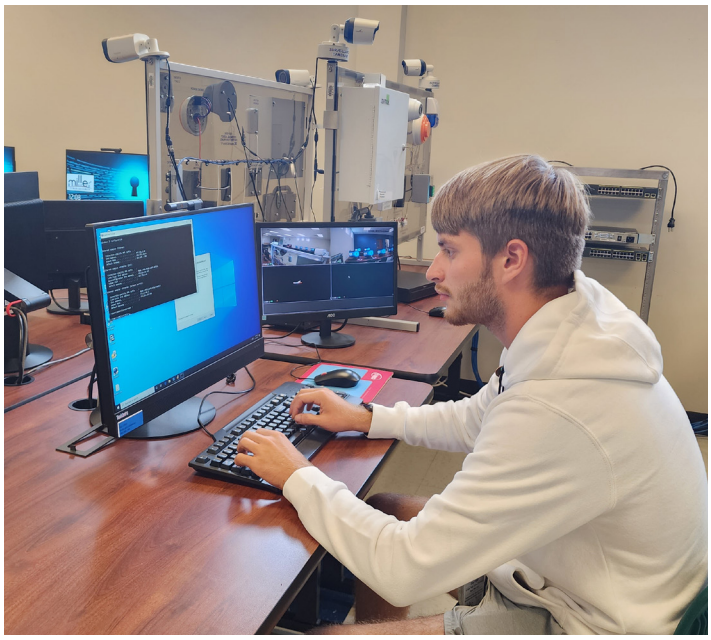
Course	Credits	Class Periods	Grade	Location
Principles of Information Technology	1.0	1	8	Jr High
OR Introduction to Computer Science	1.0	1	9-12	Home Campus
OR Computer Science I	1.0	1	9-12	Home Campus
OR AP Computer Science Principles *Prerequisite: Algebra I*	1.0	1	9-12	Home Campus
OR AP Computer Science A *Prerequisite: Algebra I* *Successful completion of this course awards one advanced math credit and one language other than English credit*	1.0	1	9-12	Home Campus
Cyber Security I & II *Prerequisite: Principles of Information Technology or Introduction to Computer Science or Computer Science I or AP Computer Science Principles or AP Computer Science A*	2.0	2	11-12	MCTC
Practicum in Cyber Security *Prerequisites: Cyber Security I & II*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITY

- CompTIA Security+

CAREER POSSIBILITIES

- Chief Information Officer
- Cryptographer
- IT Security Consultant
- IT Security Engineer
- Junior IT Auditor/Penetration Tester
- Network Administrator



8678V CYBER SECURITY I - FALL SEMESTER

8679V CYBER SECURITY II - SPRING SEMESTER

Grades: 11-12 1 Credit Each Course

Prerequisite: Either Principles of Information Technology or Introduction to Computer Science or Computer Science I or AP Computer Science Principles, or AP Computer Science A.

—

This course provides an understanding of cybersecurity concepts, system vulnerabilities, common cyber-attack mechanisms and tools, intrusion detection systems, and methods to mitigate cybersecurity risks. Simulated and hands-on labs provide experience in various areas including firewall, router, and switch security, cryptography, encryption, VPNs, virtualization, steganography, hashing, security design principles, and social engineering.

8689V PRACTICUM IN CYBER SECURITY

Grade: 12 2 Credits

Prerequisites: Cyber Security I & II

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This course provides advanced application of previously learned knowledge and skills. Students receive instruction in real-world simulations, tackling security challenges such as ethical hacking, network defense, threat analysis, and data protection. Through collaborative projects, they will gain exposure to industry-standard tools and techniques used to secure computer systems and networks. The course emphasizes problem-solving, critical thinking, and teamwork while preparing students for careers in cybersecurity or further study in the field. By the end of the practicum, students will have built a portfolio of skills and knowledge to advance in cyber defense and IT security roles.

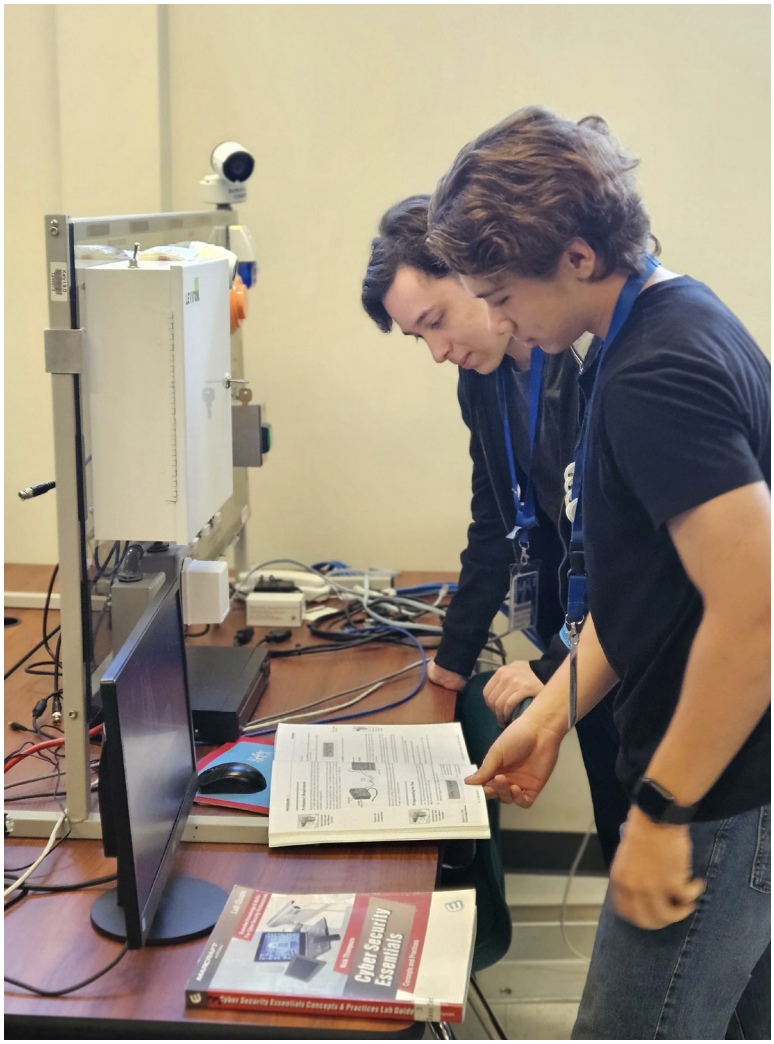
PROGRAM EXPERIENCES

This program provides students knowledge and experience through hands-on lab time, including projects in ethical hacking, cryptography practice, digital forensics, Raspberry Pi projects, and risk management.

Students will also have the opportunity to be exposed to several potential job options within the Cyber industry.

EXPECTATIONS OF STUDENTS

- **Ability to learn theory through both lecture and the computer-based lab area.**
- **Exhibit ability to work independently during lab time.**
- **Ability to apply learned skills on various simulators including programmable logic controls (PLC), electronics, pneumatics/ hydraulics, and computer numerical controls (CNC).**



MANUFACTURING ENGINEERING

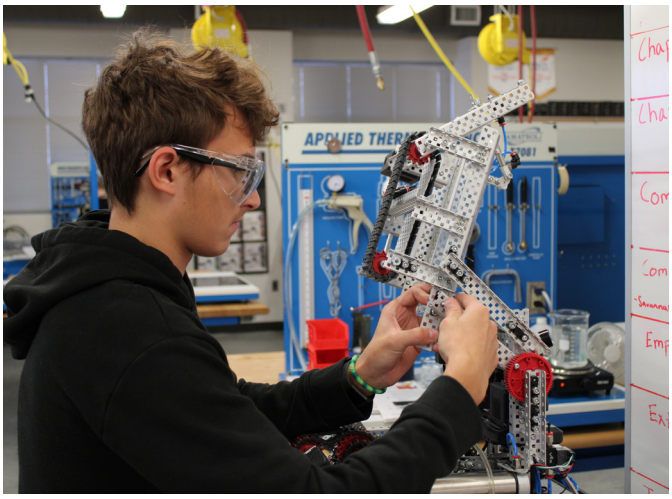
CAREER CLUSTER: MANUFACTURING

STATEWIDE PROGRAM OF STUDY: ROBOTICS & AUTOMATION TECHNOLOGY

Course	Credits	Class Periods	Grade	Location
Principles of Manufacturing OR Principles of Applied Engineering	1.0	1	8-12	Home Campus
Manufacturing Engineering I & II *Prerequisite: Principles of Manufacturing or Principles of Applied Engineering*	2.0	2	11-12	MCTC
Practicum in Manufacturing Engineering *Prerequisites: Manufacturing Engineering I & II*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Certified Manufacturing Associate
- SACA C-101 Associate- Basic Operations
- SACA C-201 Electrical Systems 1
- FANUC Robot Operator 1



PROGRAM EXPERIENCES

Manufacturing Engineering is broadly defined as the branch of engineering that focuses on the set up, continuous improvement, and operations of the manufacturing process.

Students enrolled in Manufacturing Engineering will receive hands-on lab experience to gain skills and knowledge to better understand this process.

Future Engineers and Machine Technicians alike will benefit from this course as it focuses on Mechatronics and Mechatronics Engineering.

8057V MANUFACTURING ENGINEERING I - FALL SEMESTER

8058V MANUFACTURING ENGINEERING II - SPRING SEMESTER

Grades: 11-12 1 Credit each course

Prerequisite: Principles of Applied Engineering or Principles of Manufacturing

—

This course provides an introduction to diverse manufacturing. Students develop skills in automation and mechatronics engineering utilizing innovative computer simulations and hands-on training stations to apply learned skills in hydraulics, pneumatics, mechanical fabrication, thermodynamics, electrical control and programmable logic controllers (PLCs) in a real-world environment.

8059V PRACTICUM IN MANUFACTURING ENGINEERING

Grade: 12 2 Credits

Prerequisites: Manufacturing Engineering I & II

—

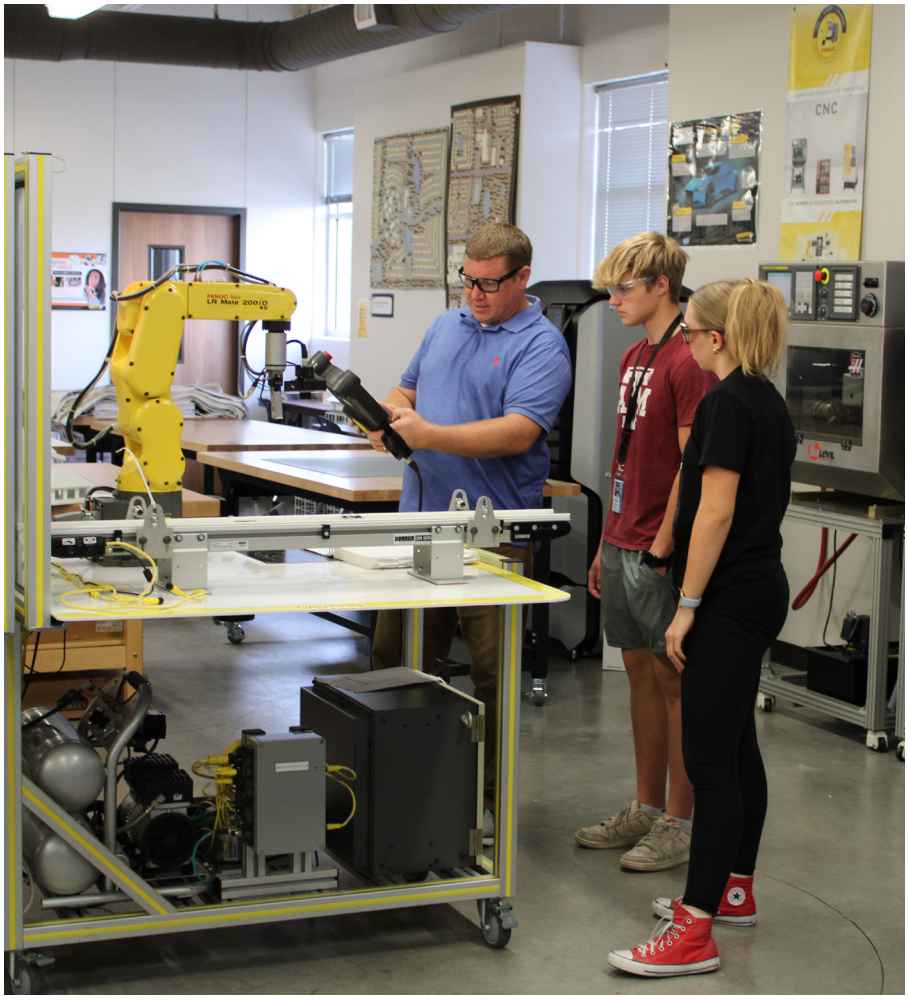
This course provides practical application of previously learned knowledge and skills in real-world and simulated environments. Students create solutions in automation and manufacturing by mastering the Tabletop Mechatronics station, Fanuc Robotic Arm and Fanuc Computer Numerical Control (CNC). They transform CAD designs into 3D models using a 3D printer.

EXPECTATIONS OF STUDENTS

- Ability to learn theory through both lecture and the computer-based modules.
- Exhibit ability to work independently during lab time.
- Ability to apply learned skills on various simulators including programmable logic controls (PLC), electronics, pneumatics/ hydraulics, and computer numerical controls (CNC).

CAREER POSSIBILITIES

- CNC Machinist
- CNC Programmer
- Electrical Engineer
- Mechatronics Engineer
- Plant Manager
- Process Controller
- Robot Programmer



AUTOMOTIVE TECHNOLOGY

CAREER CLUSTER: TRANSPORTATION, DISTRIBUTION & LOGISTICS

STATEWIDE PROGRAM OF STUDY: AUTOMOTIVE & COLLISION REPAIR

Course	Credits	Class Periods	Grade	Location
Automotive Technology I & Auto Basics	3.0	3	11-12	MCTC
Automotive Technology II *Prerequisites: Automotive Technology I & Automotive Basics*	3.0	3	12	MCTC

CERTIFICATION OPPORTUNITIES

- Multiple Automotive Service Excellence (ASE) Student certifications

CAREER POSSIBILITIES

- Detailer
- Maintenance Technician
- Master Technician
- Parts Manager
- Service Advisor
- Service Manager
- Shop Foreman
- Technical Trainer

8700V AUTOMOTIVE TECHNOLOGY I MAINTENANCE & LIGHT REPAIR

Grades: 11-12 2 credits - taken concurrently with Automotive Basics

8707V AUTOMOTIVE BASICS

Grades: 11-12 1 credit - taken concurrently with Automotive Technology I Maintenance & Light Repair

—

Automotive Basics provides an introduction to the automotive industry and focuses on safety and environmental rules and regulations, tool identification, proper tool use and employability skills. After passing a safety course in **Automotive Technology I**, students learn how to perform basic vehicle maintenance, including oil changes and brake jobs. They also learn how to perform diagnostic tests to determine vehicle issues.

8715V AUTOMOTIVE TECHNOLOGY II/LAB-AUTOMOTIVE SERVICE

Grade: 12 3 Credits

Prerequisites: Automotive Technology I and Automotive Basics

—

This course provides a more in-depth, practical application of previously learned knowledge and skills through classroom and shop settings. Students will further their knowledge of vehicle maintenance and learn how to run advanced diagnostic tests on computer-controlled systems, including anti-lock brake systems, traction control systems, and powertrain control modules. Students will perform wheel alignments and continue to diagnose and service customer vehicles in the shop.

PROGRAM EXPERIENCES

Students will develop knowledge of the operation, repair, and maintenance of motor vehicles including preventive maintenance, brakes, electronics, HVAC, drive trains, engine performance, suspension systems and tires.

They receive hands-on experience in The Garage at Miller, while working on vehicles brought in by clients from the community. Students may also have the opportunity to visit various dealerships and tour their service areas.

EXPECTATIONS OF STUDENTS

- **Work both independently and as a team to complete projects.**
- **Display professional behavior in the classroom and auto shop.**
- **Show willingness to learn theory before going into the auto shop for hands-on training.**
- **Pass online safety tests before entering the shop area.**

EDUCATION & TRAINING

CAREER CLUSTER: EDUCATION & TRAINING

STATEWIDE PROGRAM OF STUDY: TEACHING & TRAINING

Course	Credits	Class Periods	Grade	Location
Principles of Education & Training*† AND Human Growth & Development*†	1.0 1.0	1 1	9-12 10-12	Home Campus
Instructional Practices in Education *Prerequisites: Principles of Education*† and Human Growth & Development*†* **The Class of 2026 is waived from the prerequisite requirement.* †*Students in the Class of 2027 and beyond who have only taken one of the prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.*	2.0	2	11-12	MCTC
Practicum in Education *Prerequisite: Instructional Practices in Education*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Educational Aide 1 certificate through TEA

EXPECTATIONS OF STUDENTS

- Exhibit a positive attitude.
- Demonstrate strong organizational skills.
- Display the ability to follow through with tasks.
- Show willingness to assist teachers at various elementary grade levels.
- Display a desire to work hands-on with elementary students.

8990V INSTRUCTIONAL PRACTICES IN EDUCATION & TRAINING

Grades: 11-12 2 Credits

Prerequisites: Principles of Education & Training† and Human Growth & Development*†*
**The Class of 2026 is waived from the prerequisite requirement for Instructional Practices in Education.*
†Students in the Class of 2027 and beyond who have only taken one of the prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

—

This course provides students the opportunity to explore the exciting career of teaching through classroom instruction and field experience in a school setting. Students rotate through local Katy ISD schools and facilities to observe teachers during instructional delivery. Students plan lessons, assist with small groups, create bulletin boards, and work to build their leadership and communication skills.

8991V PRACTICUM IN EDUCATION & TRAINING

Grade: 12 2 Credits

Prerequisite: Instructional Practices in Education & Training

Students must have a valid Driver's License and obtain a Miller parking permit by the 3rd day of school to remain eligible.

—

This course provides a more in-depth experience as an intern in a local Katy ISD Pre-Kindergarten through 8th grade classroom. Lesson creation, classroom management skills, and teaching methods are studied and practiced. Students work alongside a teacher mentor and assist with all aspects of instruction.

PROGRAM EXPERIENCES

While there are countless positions within the education field including counselors, administrators, coaches and speech therapists, many of these first require several years of teaching experience.

This course will not only prepare students for working in the classroom as a teacher but will provide the leadership skills necessary to move up within the industry. With field experience at various grade levels, they will be able to make an informed decision at what level they are most comfortable teaching.

Students will also be able to observe the daily functions of teachers, administrators and paraprofessionals.

CAREER POSSIBILITIES

- Coach
- Librarian
- School Administrator
- School Counselor
- Social Worker
- Teacher - Elementary or Secondary

CLINICAL ROTATIONS

CAREER CLUSTER: HEALTH SCIENCE

STATEWIDE PROGRAM OF STUDY: DIAGNOSTIC & THERAPEUTIC SERVICES

Course	Credits	Class Periods	Grade	Location
Principles of Health Science† AND Medical Terminology*† *Prerequisite: Principles of Health Science* AND Health Science Theory† *Corequisite: Medical Terminology* *Prerequisite: Principles of Health Science*	1.0 1.0 1.0	1 1 1	9-12 10-12 11-12	Home Campus
Clinical Rotations *Prerequisites: Principles of Health Science† and Medical Terminology*† and Health Science Theory†* **Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.* *†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Basic Life Support (BLS)
- Cardiopulmonary Resuscitation (CPR)
- Electrocardiogram (EKG) Technician
- Patient Care Technician (PCT)

8082V CLINICAL ROTATIONS

Grade: 12 2 Credits

Prerequisites: Principles of Health Science†, Medical Terminology†, & Health Science Theory†*
**Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.*
†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

—

This course provides practical application of previously learned knowledge and skills through classroom and clinical settings. Students have the opportunity to rotate through various departments of area hospitals and community health centers while observing professional health care providers. Students are required to follow all immunization guidelines of the affiliated rotation sites.

EXPECTATIONS OF STUDENTS

- Demonstrate professionalism in the work place.
- Display excellent communication skills.
- Demonstrate motivation, integrity, and a positive attitude.

CAREER POSSIBILITIES

- Anesthesiologist
- EKG Technician
- Physician
- Podiatrist
- Radiologist
- Registered Nurse
- Surgeon
- X-Ray Technician

PROGRAM EXPERIENCES

For students who are interested in the medical field but unsure of what area they may want to focus, this course provides the opportunity for exposure to several departments. Students go on rotations once a week as a class to observe doctors and nurses performing daily functions in various medical departments.

This experience typically helps students decide what area they may or may not want to study within the medical field. Currently, MCTC is partnered with Memorial Hermann, Methodist West, and Encompass.

DENTAL ASSISTING

CAREER CLUSTER: HEALTH SCIENCE

STATEWIDE PROGRAM OF STUDY: DIAGNOSTIC & THERAPEUTIC SERVICES

Course	Credits	Class Periods	Grade	Location
Principles of Health Science†	1.0	1	9-12	Home Campus
AND				
Medical Terminology*† *Prerequisite: Principles of Health Science*	1.0	1	10-12	
AND				
Health Science Theory† *Corequisite: Medical Terminology* *Prerequisite: Principles of Health Science*	1.0	1	11-12	
Dental Assisting I & II *Prerequisites: Principles of Health Science† and Medical Terminology*† and Health Science Theory†* **Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.* *†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Basic Life Support (BLS)
- Cardiopulmonary Resuscitation (CPR)
- NOMAD X-ray Certification
- Registered Dental Assistant

8075V DENTAL ASSISTING I: ANATOMY & PHYSIOLOGY - FALL SEMESTER

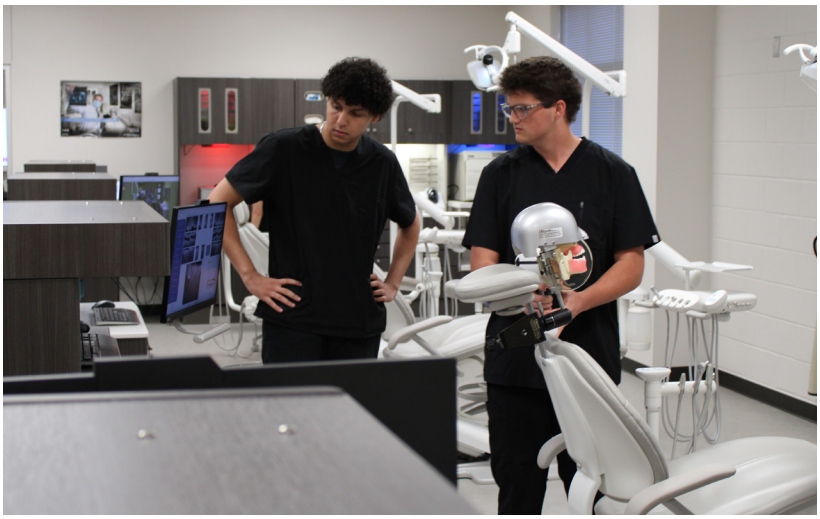
8076V DENTAL ASSISTING II: EQUIPMENT & PROCEDURES - SPRING SEMESTER

Grade: 12 1 Credit Each Course

Prerequisites: Principles of Health Science†, Medical Terminology†, & Health Science Theory†*
**Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.*
†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

—

This course provides an introduction to the dental field within the health science industry. Through lecture and hands-on skills practice, students learn how to sterilize instruments, operate suction devices, obtain and process X-rays, and take impressions for dental appliances. Administrative tasks such as scheduling appointments, patient records, and ordering supplies are also incorporated.



CAREER POSSIBILITIES

- Dental Assistant
- Dental Hygienist
- Dentist
- Oral & Maxillofacial Surgeon
- Orthodontist
- Periodontist

EXPECTATIONS OF STUDENTS

- Exhibit a high level of attention to detail.
- Ability to acquire skills to sterilize dental equipment, develop and take x-rays, and apply dental terminology.
- Willingness to work with real patients as well as mannequins.

PROGRAM EXPERIENCES

This course is a great starting point for students considering a career in the dental field as a hygienist or a dentist.

Dental Assisting lays a foundation of language, anatomy, and procedures that will be used in all dental career paths. Hands-on experience includes practicing the skills learned in our state of the art dental lab with 4 industry-level, fully functional dental chairs. Students will learn how to operate suctioning equipment, how to take full sets of X-rays, create bleach trays, and properly sterilize lab equipment, among many other skills.

EMERGENCY MEDICAL TECHNICIAN

CAREER CLUSTER: HEALTH SCIENCE

STATEWIDE PROGRAM OF STUDY: DIAGNOSTIC & THERAPEUTIC SERVICES

Course	Credits	Class Periods	Grade	Location
Principles of Health Science†	1.0	1	9-12	Home Campus
AND				
Medical Terminology*† *Prerequisite: Principles of Health Science*	1.0	1	10-12	
AND				
Health Science Theory† *Corequisite: Medical Terminology* *Prerequisite: Principles of Health Science*	1.0	1	11-12	
Emergency Medical Technician (EMT) *Prerequisites: Principles of Health Science† and Medical Terminology*† and Health Science Theory†* **Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.* *†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

- Basic Life Support (BLS)
- Cardiopulmonary Resuscitation (CPR)
- Emergency Medical Technician (EMT)

8085V EMERGENCY MEDICAL TECHNICIAN (EMT)

Grade: 12 2 Credits

Prerequisites: Principles of Health Science†, Medical Terminology†, & Health Science Theory†*
**Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.*
†Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

Students must be 17 years of age by October 1, 2025 to remain eligible.

—

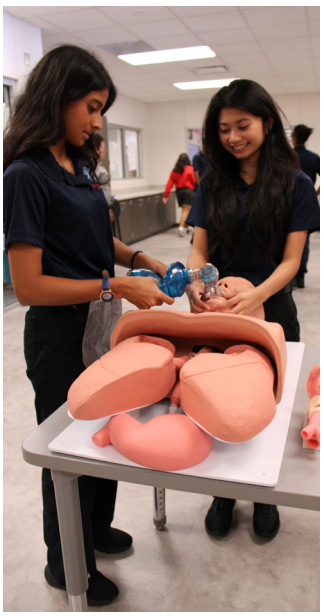
This course provides instruction in emergency medical care to persons with severe injuries or illness. Through lecture and hands-on practice, students learn skills for handling medical and trauma care. Students participate in weekend/holiday rotations with community partners to respond to real EMS calls.

EXPECTATIONS OF STUDENTS

- Demonstrate hands-on practices and preparation for testing in the national mandated patient care skills.
- Exhibit a high level of attention to detail.
- Pass a background check and drug screening test.
- Must be willing to submit to multiple health screenings and obtain flu vaccine.

CAREER POSSIBILITIES

- Emergency Room Technician
- EMT
- Firefighter
- Military Medic
- Offshore Medic
- Paramedic



PROGRAM EXPERIENCES

Students will be exposed to different career options in this field as they learn how to treat patients who have experienced various types of trauma. They are then able to use those skills while on rotations outside of school hours with actual paramedics.

These rotations are required as part of the certification students can test for at the end of the school year.

PHARMACY TECHNICIAN

CAREER CLUSTER: HEALTH SCIENCE

STATEWIDE PROGRAM OF STUDY: DIAGNOSTIC & THERAPEUTIC SERVICES

Course	Credits	Class Periods	Grade	Location
Principles of Health Science† AND Medical Terminology*† *Prerequisite: Principles of Health Science* AND Health Science Theory† *Corequisite: Medical Terminology* *Prerequisite: Principles of Health Science*	1.0 1.0 1.0	1 1 1	9-12 10-12 11-12	Home Campus
Pharmacy I, Pharmacy II, & Pharmacology *Prerequisites: Principles of Health Science+ and Medical Terminology*+ and Health Science Theory+* **Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.* *+Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.* *Note: All students must have completed Chemistry to be eligible for Pharmacy I.*	3.0	3	12	MCTC

CERTIFICATION OPPORTUNITY

- Registered Pharmacy Technician

CAREER POSSIBILITIES

- Biostatistician
- Clinical Research Associate (CRA)
- Healthcare Informatics Specialist
- Medical or Pharmaceutical Sales
- Pharmaceutical Research Scientist
- Pharmacy Technician
- Quality Assurance Specialist

8087V PHARMACY I - FALL SEMESTER

8088V PHARMACY II - SPRING SEMESTER

Grade: 12 1 Credit Each Course

8097V PHARMACOLOGY

Grade: 12 1 Credit - taken concurrently with Pharmacy I & II

Prerequisites: Principles of Health Science†, Medical Terminology†, & Health Science Theory†*
**Students in the Class of 2026 are waived from the Medical Terminology prerequisite requirement.*

+Students in the Class of 2027 and beyond who have only taken two of the three prerequisites may be considered on a deferred basis. Students who have all prerequisites will be considered first.

***Note:** All students must have completed Chemistry to be eligible for Pharmacy I.*

Students must have a valid Driver's License and obtain a Miller parking permit by the 3rd day of school to remain eligible.

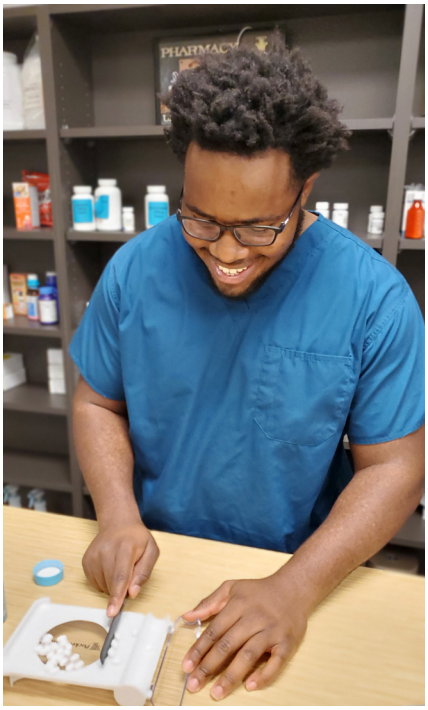
Requirement: *Student must have a social security number to register as a technician in training and provide a specific clean drug test.*

—

This course provides practical application of previously learned knowledge and skills in a pharmacy setting. Students learn how to ensure the health and safety of their patients, prepare prescription and refill requests, pack and label prescribed medications, process insurance claims, track inventory, and perform a wide range of duties for retail and hospital-based pharmacies. A non-paid internship at an approved pharmacy is required.

EXPECTATIONS OF STUDENTS

- **Ability to spend time learning and mastering 200 types of drugs, pharmacy law, pharmacology and medical math.**
- **Willingness to take and pass a background check to participate in an internship at a local pharmacy.**
- **Demonstrate professionalism while at internship site.**
- **Display excellent communication skills.**
- **Adhere to all safety and privacy protocols.**



PROGRAM EXPERIENCES

The Pharmacy Technician course provides students with a well-rounded education, combining theoretical knowledge with practical skills. They will gain a comprehensive understanding of medications, knowledge of pharmacy law and ethics, and technology skills by utilizing pharmacy software.

Through participation in an unpaid internship, students will have the opportunity to gain hands-on experience, understand the importance of teamwork and collaboration, as well as patient interaction skills both in person and on the phone

COSMETOLOGY

CAREER CLUSTER: HUMAN SERVICES

STATEWIDE PROGRAM OF STUDY: COSMETOLOGY & PERSONAL CARE SERVICES

Course	Credits	Class Periods	Grade	Location
Intro to Cosmetology & Cosmetology I	3.0	3	11-12	MCTC
Cosmetology Design & Color Theory and Cosmetology II *Prerequisites: Intro to Cosmetology & Cosmetology I*	3.0	3	12	MCTC

CERTIFICATION OPPORTUNITY

- Cosmetology Operator License through the State Board

CAREER POSSIBILITIES

- Celebrity Stylist
- Cosmetology Instructor
- Esthetician
- Film/Theater Wig & Makeup Artist
- Hairstylist
- Nail Technician
- Salon Owner
- Wax Artist

8743V INTRODUCTION TO COSMETOLOGY

Grades: 11-12 1 Credit - taken concurrently with Cosmetology I

8744V COSMETOLOGY I

Grades: 11-12 2 Credits - taken concurrently with Introduction to Cosmetology

—

This course provides an introduction to the cosmetology industry. Students develop knowledge and skills regarding various cosmetology design elements, such as form, lines, texture, structure and illusion or depth as they relate to the art of cosmetology. Instruction includes sterilization and sanitation procedures, hair care, nail care, and skin care and meets the Texas Department of Licensing and Regulation (TDLR) requirements for licensure upon passing the state examination. Analysis of career opportunities, license requirements, knowledge and skills expectations, and development of workplace skills are included.

8751V COSMETOLOGY DESIGN & COLOR THEORY

Grade: 12 1 Credit - taken concurrently with Cosmetology II

8752V COSMETOLOGY II

Grade: 12 2 Credits - taken concurrently with Design & Color Theory

Prerequisites: Introduction to Cosmetology and Cosmetology I

—

This course prepares students for the licensing exam and mastery of skills learned the previous year, working with both manikins and clients. Instruction includes advanced training in professional standards/employability skills, Texas Department of Licensing and Regulation (TDLR) rules and regulations, use of tools, equipment, technologies and materials, and practical skills, such as haircutting techniques, highlighting and dying hair, manicures, pedicures, facials, and waxing.

EXPECTATIONS OF STUDENTS

- **Display and maintain self-motivation and a positive attitude.**
- **Willingness to acquire knowledge of skin diseases, biology, and anatomy.**
- **Ability to complete work in a timely manner. Skills are timed as students practice achieving the licensing standards.**

PROGRAM EXPERIENCES

MCTC offers a comprehensive cosmetology training program that provides students with essential skills in hairstyling, hair cutting, hair coloring, nail services, skincare, and more.

In the Salon at Miller, students gain hands-on experience working with real clients, applying what they've learned in a practical setting and building confidence in their skills. In addition to honing their craft, students have the chance to express their creativity through various styling techniques, hair color choices, and nail designs.

Being in a professional cosmetology program like the one at MCTC provides valuable networking opportunities, allowing students to connect with instructors, fellow students, and clients who help them establish relationships that could be beneficial for their future career in the beauty and wellness industry.

LAW ENFORCEMENT

CAREER CLUSTER: LAW & PUBLIC SERVICE

STATEWIDE PROGRAM OF STUDY: LAW ENFORCEMENT

Course	Credits	Class Periods	Grade	Location
Law Enforcement I & II	2.0	2	11-12	MCTC
Criminal Investigations and Correctional Services *Prerequisites: Law Enforcement I & II* OR Practicum in Law *Prerequisites: Law Enforcement I & II or Court Systems & Advanced Legal Skills*	2.0 2.0	2 2	12 12	MCTC MCTC

CERTIFICATION OPPORTUNITY

- IAED Emergency Telecommunicator

EXPECTATIONS OF STUDENTS

- **Willingness to participate in activities in all aspects of government and the law.**
- **Ability to learn theory as well as application of the law.**
- **Demonstrate excellent communication skills.**
- **Demonstrate maturity to discuss sensitive topics including murder, abuse, drug involvement, etc.**

PROGRAM EXPERIENCES

Our Law Enforcement students have the opportunity to explore the history of criminal justice.

Hands-on lab time includes experiencing real world scenarios through the Judgement and Use of Force simulator.

Students will also be introduced to proper procedures for analyzing crime scenes and collecting various types of evidence to be processed.

8970V LAW ENFORCEMENT I - FALL SEMESTER

8976V LAW ENFORCEMENT II - SPRING SEMESTER

Grades: 11-12 1 Credit Each Course

—

This course provides an introduction to the law enforcement industry. Students investigate the history and philosophy of criminal justice in **Law Enforcement I**. They experience real-world scenarios through a judgement and use of force simulator, analyze crime scenes and practice traffic stops. In **Law Enforcement II**, students dive into the impact, crime trends and theories related to the causes of crime. Students learn about the search and seizure process, as well as how both the interview and interrogation processes work.

8984V CRIMINAL INVESTIGATIONS - FALL SEMESTER

8977V CORRECTIONAL SERVICES - SPRING SEMESTER

Grade: 12 1 Credit Each Course

Prerequisites: Law Enforcement I & II

—

This course provides a more in-depth application of previously learned knowledge and skills. In Criminal Investigations, students learn terminology and procedures related to investigating crime scenes. They study evidence collection, fingerprinting and courtroom presentation through case studies and simulated crime scenes. Students gain experience collecting and analyzing bodily fluids, hairs, fibers, shoe and tire impressions, bite marks, blood spatter, firearms and ammunition, and other types of evidence. In Correctional Services, students learn the roles and responsibilities of a county/municipal correctional officer. They discuss relevant rules, regulations and laws of municipal, county, state, or federal facilities as well as defensive tactics, restraint techniques, and first aid procedures used in these settings. interrogation processes work.

8985V PRACTICUM IN LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Grade: 12 2 Credits

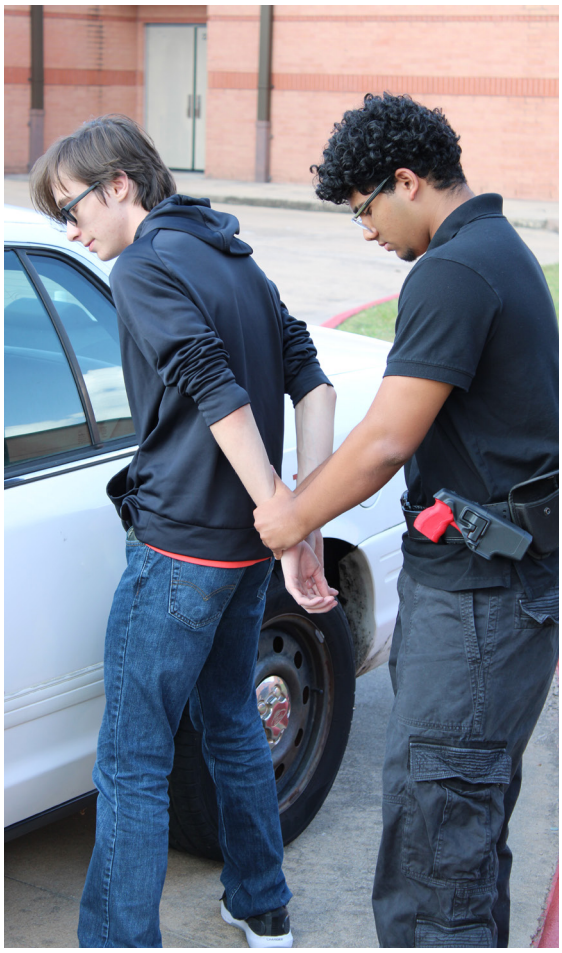
Prerequisites: Court Systems & Practices and Advanced Legal Systems OR Law Enforcement I & II
Students must have a valid Driver's License and obtain a Miller parking permit by the 3rd day of school to remain eligible.

—

This course provides supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences may occur in a variety of internship locations appropriate to the nature and level of student proficiency. This course is a capstone experience for students participating in a coherent sequence of career and technical education courses in the Law, Public Safety, Corrections, and Security Career Cluster.

CAREER POSSIBILITIES

- Border Patrol Agent
- Crime Scene Investigator
- FBI/CIA Agent
- Police Officer
- Probation Officer
- U.S. Marshal



LEGAL STUDIES

CAREER CLUSTER: LAW & PUBLIC SERVICE

STATEWIDE PROGRAM OF STUDY: LEGAL STUDIES

Course	Credits	Class Periods	Grade	Location
Court Systems & Advanced Legal Systems	2.0	2	11-12	MCTC
Practicum in Law *Prerequisites: Court Systems & Advanced Legal Systems or Law Enforcement I & II*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITY

- Community Emergency Response Team (Teen CERT)

EXPECTATIONS OF STUDENTS

- Willingness to participate in activities in all aspects of government and the law.
- Ability to learn theory as well as application of the law.
- Demonstrate excellent communication skills.
- Willingness to participate in mock trials during lab time.
- Demonstrate maturity to discuss sensitive topics including murder, abuse, drug involvement, etc.

8972V COURT SYSTEMS & PRACTICES - FALL SEMESTER

8987V ADVANCED LEGAL SYSTEMS - SPRING SEMESTER

Grades: 11-12 1 Credit Each Course

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This course provides an introduction to the legal studies industry. In **Court Systems & Practices**, students learn basics about the criminal justice system, structure of the American court system, prosecution, right to counsel, types and rules of evidence, and sentencing. Students participate in mock trials. In **Advanced Legal Systems**, students dive deeper into the practical application of the law, as well as civil and criminal procedure. Students gain an understanding of the attorney-client relationship and the importance of confidentiality, discovery, pretrial motions, jury selection, opening statements, direct and cross examinations, and closing arguments. Students will also learn how to evaluate a set of facts and mold it into a coherent trial strategy, learning trial practice from the ground floor.

8985V PRACTICUM IN LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Grade: 12 2 Credits

Prerequisites: Court Systems & Practices and Advanced Legal Systems OR Law Enforcement I & II

Students must have a valid Driver's License and obtain a Miller parking permit by the 3rd day of school to remain eligible.

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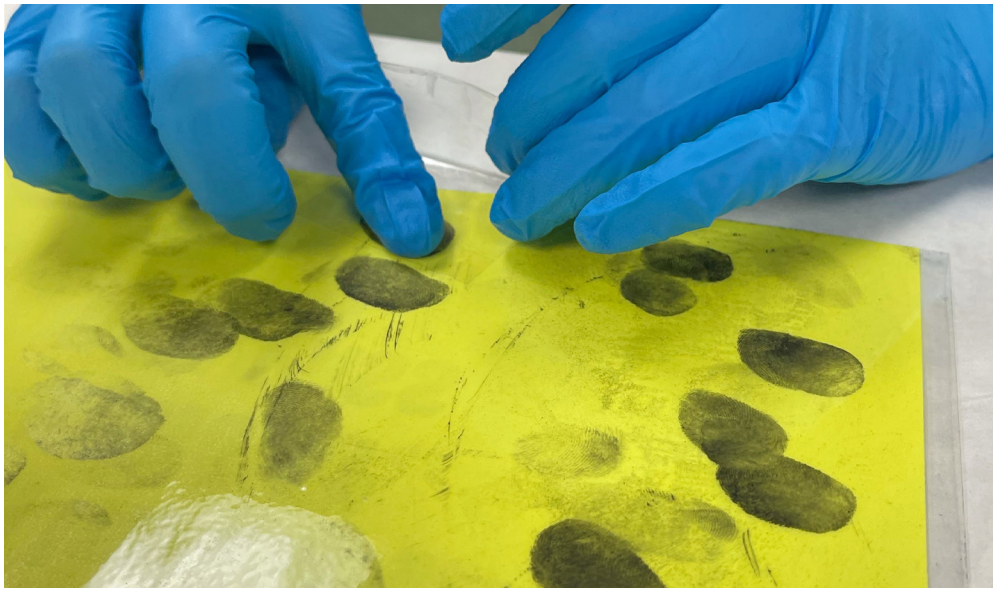
This course provides supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences may occur in a variety of internship locations appropriate to the nature and level of student proficiency. This course is a capstone experience for students participating in a coherent sequence of career and technical education courses in the Law, Public Safety, Corrections, and Security Career Cluster.

CAREER POSSIBILITIES

- Compliance Officer
- Court Reporter
- Defense Attorney
- Federal Judge
- Litigation Assistant
- Paralegal
- Prosecutor
- Social Worker
- State Judge
- Victim's Advocate



PROGRAM EXPERIENCES

Our Legal Studies students will have the opportunity to gain insight into the American court system.

Hands-on lab time includes participation in mock trials to help students understand various aspects including types and rules of evidence, the attorney-client relationship and jury selection.

While taking the Practicum in Law course, students can potentially learn more about a specific area within criminal justice through a nonpaid internship.

PRACTICUM IN STEM

CAREER CLUSTER: SCIENCE, TECHNOLOGY, ENGINEERING & MATH (STEM)

STATEWIDE PROGRAM OF STUDY: ENGINEERING

Course	Credits	Class Periods	Grade	Location
Principles of Applied Engineering	1.0	1	8-12	Home Campus
Engineering Design & Presentation *Prerequisites: Algebra I, and Principles of Applied Engineering*	1.0	1	9-12	Home Campus
Practicum in STEM *Prerequisites: Principles of Applied Engineering and Engineering Design & Presentation and Geometry*	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITY

- Auto Desk Inventor

CAREER POSSIBILITIES

- Aerospace Engineer
- Chemical Engineer
- Civil Engineer
- Environmental Engineer
- Hydraulics
- Structural Engineer

8660V PRACTICUM IN STEM

Grade: 12 2 Credits

Prerequisites: Principles of Applied Engineering and Engineering Design & Presentation and Geometry

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This course builds upon engineering foundations and increases understanding of the overall design process in a classroom and workplace environment. Major emphasis is placed on projects as they relate to the business world, including its process, key definitions, budgets, schedules, and presentations. Projects are team-based involving cross-functional disciplines (architectural, project management) to derive cohesive solutions. Students may have the opportunity to gain field experience through field trips, guest speakers, and job shadowing.

PROGRAM EXPERIENCES

MCTC provides students with a true experience and understanding of the profession. The course content focuses on real-life applications of engineering, both in lesson content and project work.

Students are provided a fun but realistic familiarity on the requirements, time commitment, and dedication it takes to pursue a career in engineering. Once completed with these courses, students should be able to make a sound and educated decision in their future careers in this industry.

EXPECTATIONS OF STUDENTS

- **Maintain self motivation.**
- **Demonstrate the ability to be a flexible team player.**
- **Demonstrate excellent verbal and written communication skills.**
- **Exhibit a willingness to share creative ideas.**

NOTES

Administration

Kelley Kirila, Principal

Judy Gray, Assistant Principal

Eileen Paulus, Assistant Principal

Kristel Green, Counselor

2024-2025 Katy ISD Board of Trustees

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2024-2025 Katy ISD Administration

Dr. Ken Gregorski, Superintendent

Leslie Haack, Deputy Superintendent

Dr. Christine Caskey, Chief Academic Officer

Dr. Emily Craig, Asst. Superintendent Secondary School Leadership and Support

Chris Morgan, Asst. Superintendent Secondary School Leadership and Support

It is the policy of Katy ISD not to discriminate on the basis of sex, disability, race, religion, color, gender, age, or national origin in its educational programs and/or activities, including career and technology programs, nor in its employment practices and to provide equal access to the Boy Scouts and other designated youth groups.

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CAREER & TECHNOLOGY CENTER