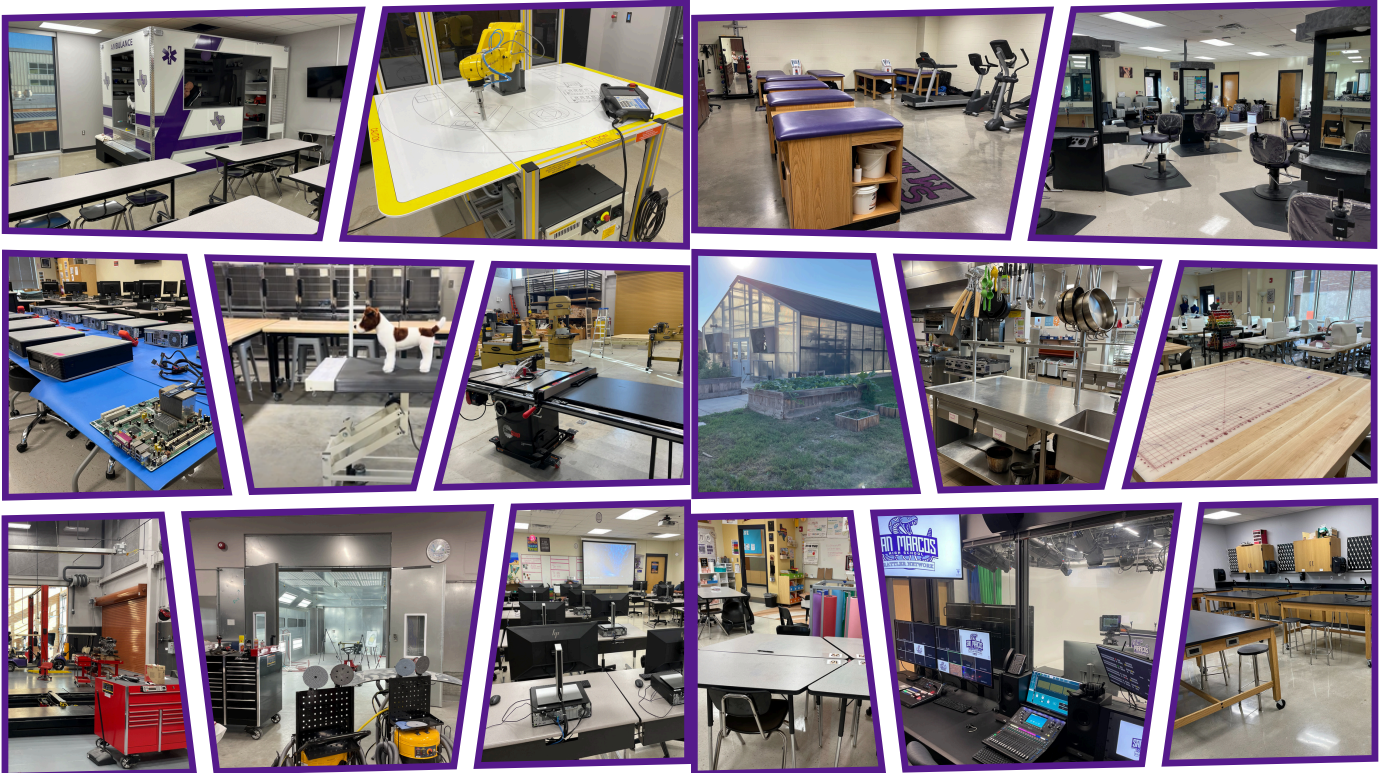




SMCISD CTE Course Catalog 2025-2026





**Accounting &
Financial Services**



**Digital
Communications**



**Agricultural Technology
& Mechanical Systems**



**Exercise Science,
Wellness, & Restoration**



Animal Science



Fashion Design



**Automotive Technology:
Auto Tech**



**Information Technology
Support & Services**



**Automotive Technology:
Collision Repair**



Law Enforcement



**Construction Management
& Inspection**



Nursing Science: CNA



**Cosmetology & Personal
Care Services**



Plant Science



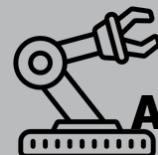
Culinary Arts



**Programming &
Software Development**



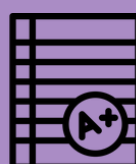
**Diagnostic & Therapeutic
Services: EMT**



**Robotics &
Automation Technology**



**Diagnostic & Therapeutic
Services: Med Assisting**



Teaching & Training



Middle School CTE Umbrella Programs





Accounting & Financial Services

Students work in the STEAM Conference Center and Business Classroom, using the latest Accounting and Financial software programs, working with real-world simulations to learn about financial services, statements, and records. Partnerships with local financial institutions, including the on-campus branch of the A+ Federal Credit Union, allow students in this Program of Study to make connections within the industry as they prepare for the variety of college and workforce opportunities that come next.

Course Sequence:

- Business Information Management I
- Accounting I
- Accounting II
- Career Preparation

College Majors

- Accounting
- Banking Support Services
- Finance
- Business Administration

Careers

- **Tax Preparer**
(avg. yearly \$56,956)
- **Accountant / Auditor**
(avg. yearly \$78,022)
- **Personal Finance Advisor**
(avg. yearly \$86,965)

Industry-Based Certification:

- Intuit QuickBooks Certified User

Career & Technical Student Organization (CTSO):

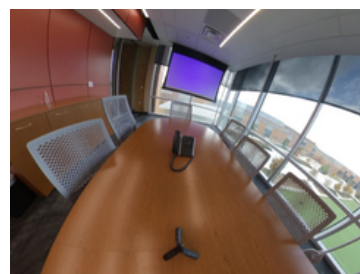
DECA

DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality, and management. DECA activities provide authentic, experiential learning methods to prepare members for college and careers. Members put their knowledge into action through rigorous project-based activities that require creative solutions with practical outcomes.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Accounting & Financial Services

Business Information Management I

Course Number: 6340 Offered in: 9-12 Credits: 1 credit Prereq: None

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

Accounting I

Course Number: 6350 Offered in: 10-12 Credits: 1 credit Prereq: BIM I

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

Accounting II

Course Number: 6355 Offered in: 11-12 Credits: 1 credit Prereq: Accounting I

This course allows students to continue the investigation of the field of accounting and the various factors that make an impact. Students will reflect on this knowledge as they engage in various material, financial, and operational accounting activities. Students will formulate, interpret, and communicate financial information for use in management decision making. Students will use equations, graphical representations, accounting tools, spreadsheet software, and accounting systems in real-world situations to maintain, monitor, control, and plan the use of finances.

Career Preparation (For Programs of Study)

Course Number: 6911 Offered in: 11-12 Credits: 2 credits

Prereq: 1 or more Level 2 or higher courses in CTE

This course provides opportunities for students to connect experience in the workforce to the knowledge and skills they have acquired in their CTE program of study. They develop business and industry employment experiences related to their program alongside advanced classroom instruction. The goal is to prepare students with a variety of skills to transition from job- to career-mindedness. **Students are required to have a program related internship as part of this course.**





Agricultural Technology & Mechanical Systems

Students work in the Ag Mechanics shop with heavy machinery, welding equipment, fabrication equipment, and other high-tech tools. Thanks to partnerships with local industry members, students get to work alongside company representatives that show how to apply the skills students learn in actual jobsite situations. Students completing this Program of Study get opportunities to continue work and apprenticeship with our industry partners and can earn the AWS D1.1 Structural Steel and AWS D9.1 Sheet Metal Welding Certificates.

Course Sequence:

- Principles of Agriculture, Food, & Natural Resources
- Agricultural Mechanics & Metal Technology
- Agricultural Structures Design & Fabrications
- Agricultural Equipment Design & Fabrications

College Majors

- Diesel Mechanics Tech.
- Agricultural Engineering
- Agricultural Systems Management
- Industrial Technology

Careers

- **Equipment Mechanic**
(avg. yearly \$46,582)
- **Heavy Equipment Manager**
(avg. yearly \$57,943)
- **Farm/Ranch Manager**
(avg. yearly \$65,490)

Industry-Based Certification:

- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding

Career & Technical Student Organization (CTSO):

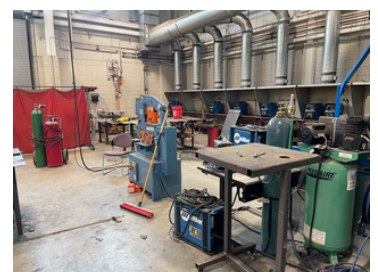
FFA

FFA is a dynamic youth organization that changes lives and prepares members for premier leadership, personal growth, and career success through agriculture education. FFA develops members' potential and helps them discover their talent through hands-on experiences, which gives members the tools to achieve real-world success.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Agricultural Technology & Mechanical Systems

Principles of Agriculture, Food, & Natural Resources

Course Number: 6100 Offered in: 9-12 Credits: 1 credit Prereq: None

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

Agricultural Mechanics & Metal Technologies

Course Number: 6150 Offered in: 10-12 Credits: 1 credit Prereq: Principles of AFNR

This course is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metal working techniques. Students have the opportunity to work on small projects of their own creation as they apply their learning to real-life simulations.

Agricultural Structures Design & Fabrication

Course Number: 6103 Offered in: 11-12 Credits: 1 credit Prereq: Ag Mech & Metal Tech.

This course allows students to explore career opportunities, entry requirements, and industry expectations in the Agricultural Mechanics industry. Students attain knowledge and skills in mechanized agriculture and technical systems, as well as various techniques related to structure design and fabrication. Students work on individual and group projects that allow them to design and create in real-life simulations.

Agricultural Equipment Design & Fabrication

Course Number: 6105 Offered in: 11-12 Credits: 2 credits Prereq: Ag Structures Des & Fab

This course allows students to apply their agricultural engineering & Fabrication knowledge and skills to practical environments related to the design and fabrication of agricultural equipment. Students work with industry partners to improve their skills in design and fabrication, as well as expanding their knowledge of various career opportunities in the field.





Animal Science

Students work in the Veterinarian Clinic, in real-life simulations based on the actual equipment and facilities found in most area veterinary clinics. Students learn the skills for animal care in these environments, as well as the needs of maintaining and operating a clinic. In practicum classes, students earn clinical hours working with local Veterinarians in their offices. Students completing this Program of Study can become Level 1 Certified Veterinary Assistants.

Course Sequence:

- Principles of Agriculture, Food, & Natural Resources
- Livestock Production
- Veterinary Medical Applications
- Practicum in Agriculture, Food, & Natural Resources

OR

- Advanced Animal Science

College Majors

- Biology
- Animal Science
- Zoology
- Biotechnology

Industry-Based Certification:

- Certified Veterinary Assistant, Level 1

Career & Technical Student Organization (CTSO):

FFA

FFA is a dynamic youth organization that changes lives and prepares members for premier leadership, personal growth, and career success through agriculture education. FFA develops members' potential and helps them discover their talent through hands-on experiences, which gives members the tools to achieve real-world success.

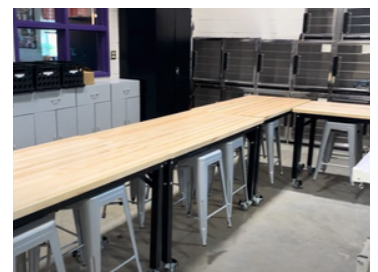
Careers

- **Veterinary Technician**
(avg. yearly \$30,180)
- **Animal Scientist**
(avg. yearly \$55,343)
- **Vetrinarian**
(avg. yearly \$103,160)

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Animal Science

Principles of Agriculture, Food, & Natural Resources

Course Number: 6100 Offered in: 9-12 Credits: 1 credit Prereq: None

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

Livestock Production

Course Number: 6111 Offered in: 10-12 Credits: 1 credit Prereq: Principles of AFNR

This course allows students to acquire knowledge and skills related to livestock and the livestock production industry. The course may address topics related to cattle, swine, sheep, goats, poultry, and/or domestic animals. Students will attain knowledge and skills related to animal systems and the workplace, career opportunities, entry requirements, and industry expectations. Students gain opportunities to learn, reinforce, apply, and transfer what they learn in a variety of settings.

Veterinary Medical Applications

Course Number: 6403 Offered in: 11-12 Credits: 1 credit Prereq: Livestock Production

This course covers topics relating to veterinary practices, including practices for large and small animal species. To prepare for careers in the field of animal science, students acquire technical knowledge and skills related to animal systems and the workplace and learn about career opportunities, entry requirements, and industry expectations. Students extend their work in the campus Veterinary Clinic, using real-world experiences to enhance their learning.

Practicum in Agriculture, Food, & Natural Resources (for Animal Science)

Course Number: 6404 Offered in: 11-12 Credits: 2 credits Prereq: Vet Med Applications

This course is designed to give students supervised practical applications of knowledge and skills. Practicum experiences occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. Students partner with local veterinary offices to earn clinical hours required to sit for the Certified Veterinary Assistant, Level 1 exam. **Students are required to use a portion of their schedule to intern at one of several partner veterinary clinics as part of this course.**

Advanced Animal Science

Course Number: 6109 Offered in: 11-12 Credits: 1 credit Prereq: Vet Med Applications

This course examines the interrelatedness of human, scientific, and technological dimensions of livestock production. Instruction is designed to allow for the application of scientific and technological aspects of animal science through field and laboratory experiences. Students work with the campus Veterinary Clinic, as well as various student animal projects as they apply their learning to real-world situations.





Automotive: Auto Technology

Students work in the Automotive Technology Shop using tools and machines exactly like the ones found in professional facilities. Partnerships with local automotive dealers allow students to work in the exact conditions they would find when entering the industry and students get a direct connection to these local partners for potential internships and jobs. Students completing this Program of Study can earn multiple ASE (Automotive Service Excellence) certifications.

Course Sequence:

- Automotive Basics
- Automotive Technology I
- Automotive Technology II
- Career Preparation

College Majors

- Automotive Technology
- Equipment Maintenance
- Automobile Mechanics
- Heavy Equipment Technology

Careers

- **Automotive Mechanic**
(avg. yearly \$44,809)
- **Engine Specialist**
(avg. yearly \$50,967)
- **Mechanics Supervisor**
(avg. yearly \$66,535)

Industry-Based Certification:

- Automotive Service Excellence certifications (multiple)

Career & Technical Student Organization (CTSO):

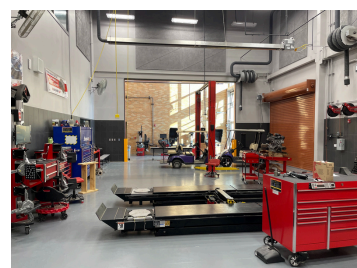
SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Automotive: Automotive Technology

Automotive Basics

Course Number: 6806 Offered in: 9-12 Credits: 1 credit Prereq: None

This course includes knowledge of the basic automotive systems and the theory and principles of the components that make up each system and how to service these systems. It includes applicable safety and environmental rules and regulations. Students will gain knowledge and skills in the repair, maintenance, and servicing of vehicle systems, and focus on safety, tool identification, proper tool use, and employability.

Automotive Technology I

Course Number: 6802 Offered in: 10-12 Credits: 2 credits Prereq: Automotive Basics

This course includes knowledge of the major automotive systems and the principles of diagnosing and servicing these systems. It includes applicable safety and environmental rules and regulations. Students will gain knowledge and skills in the repair, maintenance, and servicing of vehicle systems, and focus on safety, tool identification, proper tool use, and employability.

Automotive Technology II

Course Number: 6803 Offered in: 11-12 Credits: 2 credits Prereq: Automotive Tech I

This course continues the students' application of their knowledge of major automotive systems and the principles of diagnosing and servicing these systems. Students get to work in real-life situations and environments, servicing vehicles from actual customers in the Automotive Technology Shop, including the operations of a shop through invoicing, customer service, planning, diagnosing, and problem solving.

Career Preparation (For Programs of Study)

Course Number: 6911 Offered in: 11-12 Credits: 2 credits

Prereq: 1 or more Level 2 or higher courses in CTE

This course provides opportunities for students to connect experience in the workforce to the knowledge and skills they have acquired in their CTE program of study. They develop business and industry employment experiences related to their program alongside advanced classroom instruction. The goal is to prepare students with a variety of skills to transition from job- to career-mindedness. **Students are required to have a program related internship as part of this course.**





Automotive: Collision Repair

Students work in the Collision Repair Shop using a variety of professional repair tools, including a fully-equipped, industry standard paint bay. Students work with a variety of automobiles and parts as they learn about the various skills and operation techniques necessary for working in the collision repair industry. Students completing this Program of Study can earn the I-Car ProLevel 1 industry certificate.

Course Sequence:

- Basic Collision Repair & Refinishing
- Collision Repair
- Paint & Refinishing
- Career Preparation

College Majors

- Automotive Technology
- Equipment Maintenance
- Autobody Technology
- Collision Repair Technology

Careers

- **Automotive Mechanic**
(avg. yearly \$44,809)
- **Autobody Specialist**
(avg. yearly \$95,183)
- **Mechanics Supervisor**
(avg. yearly \$66,535)

Industry-Based Certification:

- iCar Non-Structural ProLevel 1
- Automotive Service Excellence certifications (multiple)

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Automotive: Collision Repair

Basic Collision Repair & Refinishing

Course Number: 6807 Offered in: 9-12 Credits: 1 credit Prereq: None

This course includes knowledge of the processes, technologies, and materials used in the reconstruction of vehicles. This course teaches the concepts and theory of systems related to automotive collision repair and refinishing, and provides introductory experiences for students around safety, tool identification, proper tool use, and employability.

Collision Repair

Course Number: 6808 Offered in: 10-12 Credits: 2 credits Prereq: Basic Collision Repair

This course provides students with the opportunity to begin applying their knowledge and skills of the processes, technologies, and materials used in the reconstruction of vehicles to practical settings. Students begin to utilize more advanced equipment and continue through the process of diagnosing, preparing, and completing automotive body repairs.

Paint & Refinishing

Course Number: 6809 Offered in: 11-12 Credits: 2 credits Prereq: Collision Repair

This course advances students' knowledge and skills of the processes, technologies, and materials used in the reconstruction of vehicles with further laboratory and field experiences related to the content. Students learn to repair damaged vehicles, as well as explore options for creative additions and revisions to automotive designs.

Career Preparation (For Programs of Study)

Course Number: 6911 Offered in: 11-12 Credits: 2 credits

Prereq: 1 or more Level 2 or higher courses in CTE

This course provides opportunities for students to connect experience in the workforce to the knowledge and skills they have acquired in their CTE program of study. They develop business and industry employment experiences related to their program alongside advanced classroom instruction. The goal is to prepare students with a variety of skills to transition from job- to career-mindedness. **Students are required to have a program related internship as part of this course.**





Construction Management & Inspection

Students work in the Construction Shop, using computer software to create and design projects, then bring those ideas to life with the materials and tools available in the lab. As students develop their skills, they continue to add to the creation of a tiny home project that is complete and ready for use at the end of each year. Students completing this Program of Study can earn the NCCER Construction Site Safety Technician certificate.

Course Sequence:

- Principles of Construction
- Construction Management I
- Construction Management II
- Practicum in Construction Management

College Majors

- Construction Management
- Engineering Technology
- Building Maintenance
- Project Management

Careers

- **Building Inspector**
(avg. yearly \$62,251)
- **First-Line Supervisor**
(avg. yearly \$64,473)
- **Construction Manager**
(avg. yearly \$95,072)

Industry-Based Certification:

- NCCER Construction Site Safety Technician

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Construction Management & Inspection

Principles of Construction

Course Number: 6205 Offered in: 9-12 Credits: 1 credit Prereq: None

This course is intended to provide an introduction and lay a solid foundation for those students interested in construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. This course also provides communication and occupational skills to assist the student in obtaining and maintaining employment.

Construction Management I

Course Number: 6225 Offered in: 10-12 Credits: 2 credits Prereq: Principles of Construction

This course gives students the knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. The course provides the knowledge of design techniques and tools related to the management of architectural and engineering projects.

Construction Management II

Course Number: 6227 Offered in: 11-12 Credits: 2 credits Prereq: Construction Mgmt. I

This course extends the students' knowledge and skills needed to enter the workforce as apprentice carpenters or building maintenance supervisors' assistants or to build a foundation toward a postsecondary degree in architecture, construction science, drafting, or engineering. The course allows students to work collaboratively and individually on projects from the design phase, to implementation, through completion.

Practicum in Construction Management

Course Number: 6230 Offered in: 11-12 Credits: 2 credits Prereq: Construction Mgmt. II

This course is an occupationally specific course designed to provide classroom technical instruction or on-the-job training experiences. Safety and career opportunities are included in addition to work ethics and job related study in the classroom. Students in this course take primary ownership of the design, implementation, and completion of the tiny home project, including work in electrical, plumbing, and HVAC.





Cosmetology & Personal Care Services

Students work in the Venom Salon, where they learn the skills and management techniques necessary for the operation of a full-service cosmetology operation. Students work to complete state-mandated hours as they work with actual clients in aspects of the personal care industry. Students completing this Program of Study can earn the TDLR Cosmetology Operator's License.

Course Sequence:

- Business Information Management I
- Introduction to Cosmetology
- Cosmetology I
- Cosmetology II

Industry-Based Certification:

- Cosmetology Operator License

College Majors

- Business
- Fine Arts
- Marketing

Careers

- **Skincare Specialist**
(avg. yearly \$43,200)
- **Cosmetologist**
(avg. yearly \$50,700)
- **Personal Care Supervisor**
(avg. yearly \$58,211)

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Cosmetology & Personal Care Services

Business Information Management I

Course Number: 6340 Offered in: 9-12 Credits: 1 credit Prereq: None

This course lets students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software. This course is foundational for the start of the Cosmetology & Personal Care Service program of study.

Introduction to Cosmetology

Course Number: 6327 Offered in: 10-12 Credits: 1 credit Prereq: BIM1 preferred

This course allows students to explore careers in the cosmetology industry. To prepare for success, students must have academic and technical knowledge and skills relative to the industry. Students may begin earning hours toward state licensing requirements and partner with students in upper-level courses to get experience learning the theory and process involved in operating a cosmetology operation.

Cosmetology I

Course Number: 6328 Offered in: 11-12 Credits: 2 credits Prereq: Intro To Cosmetology

This course allows students to integrate academic, career, and technical knowledge and skills in a laboratory designed to provide job-specific training for employment in cosmetology careers. Instruction includes sterilization procedures, hair care, nail care, and skin care and meets the needs for licensure. Analysis of career opportunities, license requirements, knowledge and skills expectations, and development of workplace skills are included.

Cosmetology II

Course Number: 6326 Offered in: 11-12 Credits: 3 credits Prereq: Cosmetology I

This course allows students to demonstrate proficiency in academic, technical, and practical knowledge and skills. The content is designed to provide the occupational skills required for licensure. Instruction includes advanced training in professional standards/employability skills, Texas Department of Licensing and Regulation (TDLR) rules and regulations, use of tools, equipment, technology and materials, and practical skills.





Culinary Arts

Students work in one of two Culinary Kitchen labs, where they train in industry standard environments to learn the skills and operation techniques necessary for a career in the Culinary industry. Partnerships with local businesses allow students to work in real kitchen and food service spaces, plus students plan and create many different on-campus events for actual clients. Students completing this Program of Study can earn a Food Protection Manager Certification.

Course Sequence:

- Introduction to Culinary Arts
- Culinary Arts
- Advanced Culinary Arts
- Practicum in Culinary Arts

OR

- Food Science

College Majors

- Culinary Science
- Organizational Leadership
- Foodservice Systems
- Hotel Administration

Careers

- **Chef/Head Cook**
(avg. yearly \$44,761)
- **Event Planner**
(avg. yearly \$61,339)
- **Restaurant General Manager**
(avg. yearly \$83,220)

Industry-Based Certification:

- Food Protection Manager Certification

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Culinary Arts

Introduction to Culinary Arts

Course Number: 6527 Offered in: 9-12 Credits: 1 credit Prereq: None

This course will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant, as well as food production skills, various levels of industry management, and hospitality skills. The course is offered as a classroom and laboratory-based course.

Culinary Arts

Course Number: 6528 Offered in: 10-12 Credits: 2 credits Prereq: Intro to Culinary Arts

This course begins with the fundamental and principles of the art of cooking and the science of baking and includes management and production skills and techniques. Students can pursue an industry certification with the demonstration of their skills. This course is offered as a laboratory-based course.

Advanced Culinary Arts

Course Number: 6529 Offered in: 11-12 Credits: 2 credits Prereq: Culinary Arts

This course will extend content and enhance skills introduced in Culinary Arts by in-depth instruction of industry-driven standards in order to prepare students for success in higher education, certifications, and/or immediate employment. Students in this course will have the opportunity to plan, design, and implement a variety of culinary events both on and off campus.

Practicum in Culinary Arts

Course Number: 6535 Offered in: 11-12 Credits: 2 credits Prereq: Advanced Culinary Arts

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

Food Science

Course Number: 6536 Offered in: 11-12 Credits: 1 credit

Prereq: 3 units of Science, including Chemistry & Biology

This course allows students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. The course studies the nature of food, the causes of deterioration, the principles underlying food processing, and the improvement of food for the consuming public.





Diagnostic & Therapeutic Services: EMT

Students work in the Health Science Laboratories, in true-to-life simulations, including a full-scale ambulance simulator, to learn the skills necessary to work as an Emergency Medical Technician. Students work not just in the campus labs but in off-campus health care facilities to earn hours and develop practical knowledge for entry into the Health Science industry. Students that complete this Program of Study can earn their Texas EMT-B license.

Course Sequence:

- Principles of Health Science
- Medical Terminology
- Anatomy & Physiology
- Emergency Medical Technician

Industry-Based Certification:

- Emergency Medical Technician - Basic

Career & Technical Student Organization (CTSO):

HOSA

HOSA is a global student-led organization recognized by the U.S. Department of Education and the Department of Health and Human Services and several federal and state agencies. HOSA's mission is to empower HOSA-Future Health Professionals to become leaders in the global health community, through education, collaboration, and experience. HOSA actively promotes career opportunities in the health industry and to enhance the delivery of quality health care to all people.

College Majors

- Registered Nursing
- Emergency Medical Technology
- Nursing Administration
- Medical Informatics

Careers

- **Nursing Assistant**
(avg. yearly \$30,856)
- **Emergency Medical Technician**
(avg. yearly \$34,169)
- **Registered Nurse**
(avg. yearly \$79,831)

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Diagnostic & Therapeutic Services: EMT

Principles of Health Science

Course Number: 6401 Offered in: 9-12 Credits: 1 credit Prereq: None

This introductory course exposes students to the health care industry. Students will gain an overview of the health care industry including exercise science and wellness, certified nursing, medical assisting, emergency medical services, and ethical and legal concerns in the industry.

Medical Terminology

Course Number: 6411 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Health Sci.

This course introduces students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Anatomy & Physiology

Course Number: 3266 Offered in: 10-12 Credits: 1 credit Prereq: Med Terms

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

Emergency Medical Technician

Course Number: 6414 Offered in: 11-12 Credits: 2 credits Prereq: Biology / Anat. & Phys.

This course is a preparation course for certification as an EMT-Basic. The course includes all the skills necessary to provide emergency medical care at a basic life support level with either an emergency service or other specialized service. Extended learning experiences are a part of the class of through partnerships with industry professionals.





Diagnostic & Therapeutic Services: Med Assisting

Students work in the Health Science Laboratories, in true-to-life simulations to learn the skills necessary to work in a variety of health-related professions. Using both theoretical knowledge and clinical applications, students apply their skills in practical environments that allow them to explore further opportunities in the Health Care Industry. Students completing this Program of Study can become a Certified Medical Assistant.

Course Sequence:

- Principles of Health Science
- Medical Terminology
- Anatomy & Physiology
- Medical Assisting

Industry-Based Certification:

- Medical Assistant

College Majors

- Medical Insurance Coding
- Emergency Medical Technology
- Occupational Therapy
- Radiological Science

Careers

- **Medical Assistant**
(avg. yearly \$36,834)
- **Dental Hygienist**
(avg. yearly \$79,663)
- **Physician Assistant**
(avg. yearly \$127,332)

Career & Technical Student Organization (CTSO):

HOSA

HOSA is a global student-led organization recognized by the U.S. Department of Education and the Department of Health and Human Services and several federal and state agencies. HOSA's mission is to empower HOSA-Future Health Professionals to become leaders in the global health community, through education, collaboration, and experience. HOSA actively promotes career opportunities in the health industry and to enhance the delivery of quality health care to all people.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Diagnostic & Therapeutic Services: Med Assisting

Principles of Health Science

Course Number: 6401 Offered in: 9-12 Credits: 1 credit Prereq: None

This introductory course exposes students to the health care industry. Students will gain an overview of the health care industry including exercise science and wellness, certified nursing, medical assisting, emergency medical services, and ethical and legal concerns in the industry.

Medical Terminology

Course Number: 6411 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Health Sci.

This course introduces students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Anatomy & Physiology

Course Number: 3266 Offered in: 10-12 Credits: 1 credit Prereq: Med Terms

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

Medical Assisting

Course Number: 6406 Offered in: 11-12 Credits: 2 credits Prereq: Med Terms

This course provides students both a theoretical and clinical view of careers in the health industry. Students work in classroom settings to develop advanced knowledge and skills in analyzing systematic procedures for problem solving, evaluating the impacts of decisions, and suggesting modifications based on outcomes. Students also work in a clinical setting to employ medical vocabulary specific to health care settings, perform admission, discharge, and transfer functions, and study industry standards.





Digital Communications

Students work in the Rattler Broadcast Studio, where they get to learn in a state-of-the-art lab space that includes a computer lab, a control room, and a recording studio. Students get to create movies, commercials, and conduct live broadcasts, learning the skills necessary for a career in the Audio/Video industry. Students completing this Program of Study can earn a variety of Adobe Certified Associate Professional Certificates.

Course Sequence:

- Digital Design & Media Production
- Audio/Video Production I
- Audio/Video Production II
- Practicum in Audio/Video Production

College Majors

- Cinematography
- Recording Arts Technology
- Advertising
- Commercial Art

Careers

- **Camera Operator**
(avg. yearly \$48,422)
- **Audio/Video Technician**
(avg. yearly \$46,319)
- **Producer/Director**
(avg. yearly \$65,029)

Industry-Based Certification:

- Adobe Certified Professional in Digital Video: Premiere Pro
- Adobe Certified Professional in Visual Design: Photoshop

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Digital Communications

Digital Design & Media Production

Course Number: 6386 Offered in: 9-12 Credits: 1 credit Prereq: None

This course allows students to demonstrate creative thinking, develop innovative strategies, and use communication tools in order to work effectively with others as well as independently on a variety of graphic design and media production projects. Students will learn digital design principles and digital citizenship, then incorporate their learning into media projects for public consumption.

Audio/Video Production I

Course Number: 6390 Offered in: 10-12 Credits: 1 credit Prereq: Digital Des. & Media Prod.

This course develops the knowledge and skills required for success with audio and video technology, film production, and all aspects of the audio/video communications industry. Students work in the Rattler Broadcast Studio to practice and refine their skills related to pre-production, production, and, post-production audio and video products.

Audio/Video Production II

Course Number: 6362 Offered in: 11-12 Credits: 1 credit Prereq: A/V Production I

This course allows students to develop an understanding of the industry with a deeper focus on pre-production, production, and post-production products. Through diverse forms of storytelling and production, students will exercise and develop creativity, intellectual curiosity, and critical thinking, problem-solving, and collaborative skills.

Practicum in Audio/Video Production

Course Number: 6363 Offered in: 11-12 Credits: 2 credits Prereq: A/V Production II

This course builds upon the concepts taught in A/V Production II, Production developing advanced technical knowledge and skills needed for success in the audio/video communications industry. Students continue to develop their skills in pre-production, production, and post-production projects, in a professional environment. Through various community partnerships, students have the opportunity to create and design projects for real clients as they demonstrate their mastery of skills.





Exercise Science, Wellness, & Restoration

Students work in both the classroom and the Athletic Training facility with various sports teams on campus to practice their skills in Kinesiology and Exercise Science. Students learn about the importance of diet and exercise in an athlete's work, as well as focusing on techniques to help athletes recover from injury and maintain a healthy, balanced lifestyle. Students completing this Program of Study can earn a Certified Personal Trainer Certificate.

Course Sequence:

- Principles of Health Science
- Kinesiology I
- Kinesiology II / Anatomy & Physiology
- Career Preparation I

Industry-Based Certification:

- Certified Personal Trainer

Career & Technical Student Organization (CTSO):

HOSA

HOSA is a global student-led organization recognized by the U.S. Department of Education and the Department of Health and Human Services and several federal and state agencies. HOSA's mission is to empower HOSA-Future Health Professionals to become leaders in the global health community, through education, collaboration, and experience. HOSA actively promotes career opportunities in the health industry and to enhance the delivery of quality health care to all people.

College Majors

- Nutrition Science
- Kinesiology
- Physical Therapy
- Exercise Physiology

Careers

- **Exercise Trainer**
(avg. yearly \$44,916)
- **Physical Therapist**
(avg. yearly \$74,866)
- **Athletic Trainer**
(avg. yearly \$54,447)

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Exercise Science, Wellness & Restoration

Principles of Health Science

Course Number: 6401 Offered in: 9-12 Credits: 1 credit Prereq: None

This introductory course exposes students to the health care industry. Students will gain an overview of the health care industry including exercise science and wellness, certified nursing, medical assisting, emergency medical services, and ethical and legal concerns in the industry.

Kinesiology I

Course Number: 7703 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Health Sci.

This course is designed to introduce students to the basic concepts of kinesiology. Students will gain an understanding of body mechanics, physiological function of muscles and movements, the history of kinesiology, and the psychological impact of sports and athletic performance. Students will also explore careers with the kinesiology field and be able to explain the societal demands for kinesiology-related jobs. **Students expected to also take Athletics for laboratory experience with this course.**

Kinesiology II

Course Number: 7704 Offered in: 11-12 Credits: 1 credit Prereq: Kinesiology I

This course is designed to provide students an advanced level of knowledge, skills, and understanding of body composition and the effect on health, nutritional needs of physically active individuals, appropriate rehabilitation services, and aerobic training intensity programs. Students explore the exercise business model and gain an understanding of therapeutic sports psychology. **Students expected to also take Athletics for laboratory experience with this course.**

Anatomy & Physiology

Course Number: 3266 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Health Sci.

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

Career Preparation (For Programs of Study)

Course Number: 6911 Offered in: 11-12 Credits: 2 credits

Prereq: 1 or more Level 2 or higher courses in CTE

This course provides opportunities for students to connect experience in the workforce to the knowledge and skills they have acquired in their CTE program of study. They develop business and industry employment experiences related to their program alongside advanced classroom instruction. The goal is to prepare students with a variety of skills to transition from job- to career-mindedness. **Students are required to have a program related internship as part of this course.**





Fashion Design

Students work in the Fashion Design Lab, where students bring their creations to life, working with a variety of fashion industry machines. Students partner with the Cosmetology Department to plan, create, and organize runway shows, fashion competitions, and other events that allow them to showcase the creative and innovative designs they complete. In addition to the creation skills, students also learn about the organization and management techniques necessary to work in the fashion industry. Students completing this Program of Study can earn a variety of Adobe Certified Professional Certificates.

Course Sequence:

- Digital Media
- Fashion Design I
- Fashion Design II
- Practicum in Fashion Design

College Majors

- Visual Communications
- Media Design
- Fashion Design
- Commercial Art

Careers

- **Merchandiser**
(avg. yearly \$59,220)
- **Fashion Designer**
(avg. yearly \$75,600)
- **Fashion Buyer**
(avg. yearly \$108,260)

Industry-Based Certification:

- Adobe Certified Professional in Graphic Design and Illustration Using Adobe Illustrator

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Fashion Design

Digital Media

Course Number: 6715 Offered in: 9-12 Credits: 1 credit Prereq: None

This course allows students to analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve a problem. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will apply reading, writing, computing, communication, and critical thinking to an IT environment.

Fashion Design I

Course Number: 6301 Offered in: 10-12 Credits: 1 credit Prereq: Digital Media

This course introduces students to the knowledge and skills required for a career in the Fashion Industry. Students study all aspects of the textile and apparel industries and develop an understanding of the fashion industry with an emphasis on design and construction. Students work individually and in groups to create products based on their understanding of the factors that impact consumer purchasing of fashion and apparel.

Fashion Design II

Course Number: 6323 Offered in: 11-12 Credits: 2 credits Prereq: Fashion Design I

This course strengthens students' knowledge and skills in all aspects of the textile and apparel industries as they develop deeper understanding of the fashion industry with an emphasis on design and construction. Students continue project-based learning while creating a portfolio of their design work, highlighting their ability to design, develop, and construct garments and perform evaluations on existing garments.

Practicum in Fashion Design

Course Number: 6318 Offered in: 11-12 Credits: 2 credits Prereq: Fashion Design II

This course provides students an opportunity to work on higher-level projects and design work centered on the fashion industry and related skills. Students partner with industry experts as they learn more about the design, production, and exhibition of fashion related products, as well as the factors that go into the business and marketing portion of the industry.





Information Technology, Support & Services

Students work in one of the Computer Science labs, where they explore various educational opportunities available while administering and creating computer databases and management systems. Students work hands-on with various pieces of technological equipment to extend their knowledge and prepare for future learning and/or employment in the Technology industry. Students completing this Program of Study can earn a Microsoft 365 Fundamentals Certificate.

Course Sequence:

- Principles of Information Technology
- Computer Maintenance
- IT Troubleshooting
- Practicum in Information Technology

Industry-Based Certification:

- Microsoft 365 Fundamentals

College Majors

- Computer Science
- Network & System Administration
- Information Systems
- Computer Engineering

Careers

- **Computer Support Specialist**
(avg. yearly \$51,411)
- **Network Specialist**
(avg. yearly \$66,646)
- **Computer Engineer**
(avg. yearly \$119,662)

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Information Technology & Support Services

Principles of Information Technology

Course Number: 6711 Offered in: 9-12 Credits: 1 credit Prereq: None

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

Computer Maintenance

Course Number: 6712 Offered in: 9-12 Credits: 1 credit Prereq: Principles of Info Tech

This course allows students to acquire knowledge of computer maintenance and create appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer maintenance. Students will apply technical skills to address the IT industry and emerging technology.

IT Troubleshooting

Course Number: 6740 Offered in: 10-12 Credits: 1 credit Prereq: Computer Maintenance

This course allows students to apply logic over technical components to identify and resolve problems. The course focuses on developing a methodical approach in IT troubleshooting and leveraging those skills in a workplace environment. Students will learn to use IT resources, information, and data safely, ethically, and following legal guidelines. They will work within a service level model that helps them to interpret, clarify, and diagnose issues with hardware, software, and networking.

Practicum in Information Technology

Course Number: 6780 Offered in: 11-12 Credits: 2 credits Prereq: IT Troubleshooting

This course gives students advanced knowledge and skills in the Technology application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. They learn the proper use of analytical skills and application of IT concepts and standards to prepare for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.





Law Enforcement

Students work in the Law Enforcement Classroom and Forensics Lab in real-world scenarios designed to help them understand various aspects of law enforcement. Students work through crime scenes, conduct investigations, develop legal strategies in mock court scenarios, and partner with local law enforcement professionals to cover all aspects of a career in this field. Students completing this Program of Study may earn a Non-Commissioned Security Officer certificate.

Course Sequence:

- Principles of Law, Public Safety, Corrections, & Security
- Law Enforcement I
- Law Enforcement II
- Practicum in Law Enforcement

OR

- Forensic Science

College Majors

- Criminal Justice
- Forensic Science
- Law Enforcement
- Telecommunications

Careers

- **Police / Sheriff's Officers**
(avg. yearly \$64,373)
- **Criminal Investigator**
(avg. yearly \$82,090)
- **Police Detective**
(avg. yearly \$97,571)

Industry-Based Certification:

- Non-Commissioned Security Officer Level II

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Law Enforcement

Principles of Law, Public Safety, Corrections, & Security

Course Number: 6600 Offered in: 9-12 Credits: 1 credit Prereq: None

This course introduces students to professions in law enforcement, Corrections, & Security protective services, corrections, firefighting, and emergency management services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services. The course provides students with an overview of skills necessary for careers in a variety of criminal justice fields.

Law Enforcement I

Course Number: 6610 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Law

This course is an overview of the history, organization, and functions of local, state, and federal law enforcement. Students will understand the role of constitutional law at local, state, and federal levels; the U.S. legal system; criminal law; and law enforcement technology and the, classification and elements of crime.

Law Enforcement II

Course Number: 6615 Offered in: 11-12 Credits: 1 credit Prereq: Law Enforcement I

This course allows students to extend their learning on functions of local, state, and federal law enforcement so they may acquire the knowledge and skills necessary to prepare for a for a career in law enforcement. Students will understand ethical and legal responsibilities, patrol procedures, first responder roles, telecommunications, emergency equipment operations, and courtroom testimony.

Practicum in Law, Public Safety, Corrections, & Security

Course Number: 6620 Offered in: 11-12 Credits: 2 credits Prereq: Law Enforcement II

This course is designed to give students supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

Forensic Science

Course Number: 6611 Offered in: 11-12 Credits: 1 credit Prereq: Biology & Chemistry

This course introduces students to the application of science to connect a violation of law to a specific criminal, criminal act, or behavior and victim. Students will learn terminology and procedures related to the search and investigation of physical evidence in criminal cases as they are performed in a typical crime laboratory. Using scientific methods, students will collect and analyze evidence such as fingerprints, bodily fluids, hairs, fibers, paint, glass, and cartridge cases.





Nursing Science: Certified Nurse Aide (CNA)

Students work in the Health Science Laboratories, in true-to-life simulations, including a full-scale ambulance simulator, to learn the skills necessary to work as a Certified Nurse Aide. Students work not just in the campus labs but in off-campus health care facilities to earn hours and develop practical knowledge for entry into the Health Science industry. Students that complete this Program of Study can earn their CNA license.

Course Sequence:

- Principles of Health Science
- Medical Terminology
- Anatomy & Physiology
- Practicum in Health Science

Industry-Based Certifications:

- Certified Nurse Aide (CNA)
- Phlebotomy Technician

Career & Technical Student Organization (CTSO):

HOSA

HOSA is a global student-led organization recognized by the U.S. Department of Education and the Department of Health and Human Services and several federal and state agencies. HOSA's mission is to empower HOSA-Future Health Professionals to become leaders in the global health community, through education, collaboration, and experience. HOSA actively promotes career opportunities in the health industry and to enhance the delivery of quality health care to all people.

College Majors

- Registered Nursing
- Nursing Science
- Nursing Administration
- Medicine

Careers

- **Nursing Assistant**
(avg. yearly \$30,856)
- **Licensed Vocational Nurse**
(avg. yearly \$50,913)
- **Registered Nurse**
(avg. yearly \$79,831)

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Nursing Science: Certified Nurse Aide

Principles of Health Science

Course Number: 6401 Offered in: 9-12 Credits: 1 credit Prereq: None

This introductory course exposes students to the health care industry. Students will gain an overview of the health care industry including exercise science and wellness, certified nursing, medical assisting, emergency medical services, and ethical and legal concerns in the industry.

Medical Terminology

Course Number: 6411 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Health Sci.

This course introduces students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

Anatomy & Physiology

Course Number: 3266 Offered in: 10-12 Credits: 1 credit Prereq: Med Terms

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

Practicum in Health Science

Course Number: 6419 Offered in: 11-12 Credits: 2 credits Prereq: Anat. & Phys.

This course gives students practical applications of previously studied knowledge and skills, with a focus on earning the Certified Nurse Aide certification. Students will work through curriculum and apply practical skills while earning hours that count toward the CNA certification. The course will prepare students to enter the medical field upon graduation and/or pursuing post-secondary education goals.





Plant Science

Students work in the Greenhouse and Floral Design Lab learning about all the aspects of horticulture and the floral industry. Students maintain and operate different plants in the greenhouse and make professional floral arrangements in the lab, working toward the Principles of Floral Design Certification and/or the Texas State Florist's Association Level 1 Floral Certification.

Course Sequence:

- Principles of Ag, Food, & Natural Resources
- Floral Design
- Advanced Floral Design
- Advanced Plant & Soil Science

OR

- Practicum in Ag, Food, & Natural Resources

College Majors

- Biology
- Horticulture
- Botony
- Plant Pathology

Careers

- **Pesticide Servicer**
(avg. yearly \$46,153)
- **Floral Designer**
(avg. yearly \$55,070)
- **Farm/Ranch Manager**
(avg. yearly \$65,490)

Industry-Based Certifications:

- TSFA Knowledge Based Floral Certificate
- Principles of Floral Design Certification

Career & Technical Student Organization (CTSO):

FFA

FFA is a dynamic youth organization that changes lives and prepares members for premier leadership, personal growth, and career success through agriculture education. FFA develops members' potential and helps them discover their talent through hands-on experiences, which gives members the tools to achieve real-world success.

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte



Courses: Plant Science:

Principles of Agriculture, Food, & Natural Resources

Course Number: 6100 Offered in: 9-12 Credits: 1 credit Prereq: None

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

Floral Design

Course Number: 6140 Offered in: 10-12 Credits: 1 credit Prereq: Principles of Ag

This course is designed to develop students' ability to identify and demonstrate the principles and techniques related to floral design as well as develop an understanding of the management of floral enterprises. Students will acquire technical knowledge and skills related to horticultural systems, career opportunities, entry requirements, and industry expectations.

Advanced Floral Design

Course Number: 6141 Offered in: 11-12 Credits: 1 credit Prereq: Floral Design

This course builds on students' knowledge from Floral Design and introduces them to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event.

Advanced Plant & Soil Science

Course Number: 6131 Offered in: 11-12 Credits: 1 credit Prereq: Adv. Floral Design

This course provides a way of learning about the natural world. Students learn how plant and soil science has influenced a vast body of knowledge, that there are still applications to be discovered, and that plant and soil science is the basis for many other fields of science. Students learn the technical skills related to plant and soil science and the workplace, including aspects regarding career opportunities and industry expectations.

Practicum in Agriculture, Food, & Natural Resources (for Plant Science)

Course Number: 6404 Offered in: 11-12 Credits: 2 credits Prereq: Adv. Floral Design

This course is designed to give students supervised practical applications of knowledge and skills. Practicum experiences occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. Students partner with local floral shops to earn practical experience in the industry. **Students are required to use a portion of their schedule to intern at one of several partner floral shops as part of this course.**





Programming & Software Development

Students work in the Computer Science Lab in a variety of computer languages designed to assist in developing and designing operating systems-level software. Students create their own material, as well as work with real-life situations, to apply their learning to potential scenarios faced in the industry. Students completing this Program of Study may earn a CodeHS Python Level 1 Certification.

Course Sequence:

- Computer Science I
- Computer Science II
- AP Computer Science Principles
- AP Computer Science A

Industry-Based Certification:

- CodeHS Python Level 1 Certification

College Majors

- Computer Science
- Computer Programming
- Data Science
- Computer Software Engineering

Careers

- **Computer Support Specialist**
(avg. yearly \$51,411)
- **Network Specialist**
(avg. yearly \$65,646)
- **Computer Engineer**
(avg. yearly \$119,662)

Career & Technical Student Organization (CTSO):

SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Programming & Software Development

Computer Science I

Course Number: 6376 Offered in: 9-12 Credits: 1 credit Prereq: None

This course is designed to foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Using computer science knowledge, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results, all while learning to be good digital citizens.

Computer Science II

Course Number: 6377 Offered in: 10-12 Credits: 1 credit Prereq: Comp Sci I, Algebra I

This course allows students to collaborate with one another, their instructor and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts, to access, analyze, and evaluate information needed to solve problems. Students gain an understanding of computer science through the study of technology operations, systems, and concepts.

AP Computer Science Principles

Course Number: 6371 Offered in: 10-12 Credits: 1 credit Prereq: Algebra I

This course is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge.

AP Computer Science A (Math/LOTE)

Course Number: 6367/6382 Offered in: 10-12 Credits: 2 credits Prereq: Preferred AP CSP

This course is an advanced college-level computing course that allows students to design a program, develop the algorithms it needs, and write code to implement it. Students also test program code and correct errors, as well as document and explain how program code works. This course is two credits, one semester for Math credit and the other semester for LOTE.





Robotics & Automation Technology

Students work in the Robotics Lab, where they design, create, and modify various machines and electronic robots and structures. Students compete in robotic competitions where they are able to test their creations in a variety of task-oriented contests. They also work with local businesses that specialize in robotics to learn how to apply what they learn to the complex machinery components found in a growing number of manufacturing facilities in the area. Students completing this Program of Study can earn a FANUC Robot Operator 1 Certificate.

Course Sequence:

- Principles of Applied Engineering
- Robotics I
- Robotics II
- Engineering Design & Presentation I

College Majors

- Mechanical Engineering
- Industrial Technology
- Robotics Technology
- Electrical Engineering

Careers

- **Computer Operator**
(avg. yearly \$46,353)
- **Industrial Engineer**
(avg. yearly \$100,000)
- **Electrical Engineer**
(avg. yearly \$102,534)

Industry-Based Certification:

- FANUC Robot Operator I

Career & Technical Student Organization (CTSO):

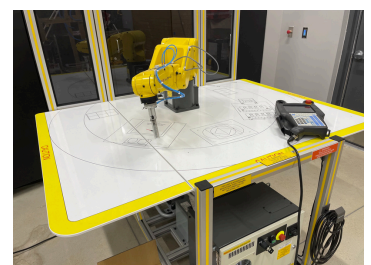
SkillsUSA

SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. They help each student excel. A nonprofit national education association, SkillsUSA serves middle-school, high-school and college/postsecondary students preparing for careers in trade, technical, and skilled service occupations.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Robotics & Automation Technology

Principles of Applied Engineering

Course Number: 6749 Offered in: 9-12 Credits: 1 credit Prereq: None

This course provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Students will have an understanding of the various fields of engineering and experience working on a design team to develop systems.

Robotics I

Course Number: 6730 Offered in: 10-12 Credits: 1 credit Prereq: Prin of Applied Eng.

This course allows students to transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, expectations, and educational needs in the robotic and automation industry.

Robotics II

Course Number: 6735 Offered in: 10-12 Credits: 1 credit Prereq: Robotics I

This course allows students to explore artificial intelligence and programming in the robotic and automation industry. Through implementation of the design process, students will transfer academic skills to component designs in a project-based environment. Students will build prototypes and use software to test their designs.

Engineering Design & Presentation I

Course Number: 6541 Offered in: 11-12 Credits: 2 credits Prereq: Robotics II

This course is a continuation of skills learned in previous courses in this program. Students will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.





Teaching & Training

Students work in the Teaching & Training Center, where they learn the skills necessary for advancement into the Education field. Students create instructional materials and learn about pedagogy in classroom settings, then apply that knowledge in real-world environments through partnerships with other campuses in SMCISD. Students completing this Program of Study may earn an Educational Aide I certificate.

Course Sequence:

- Principles of Education & Training
- Human Growth & Development
- Instructional Practices
- Practicum in Education & Training

College Majors

- Continuing Education
- Educational Technology
- Education & Teaching
- Curriculum & Instruction

Careers

- **Teaching Assistant**
(avg. yearly \$31,869)
- **Teacher**
(avg. yearly \$61,035)
- **Administrator**
(avg. yearly \$81,976)

Industry-Based Certification:

- Educational Aide I

Career & Technical Student Organization (CTSO):

TAFE

The Texas Association of Future Educators is a co-curricular statewide non-profit student organization created to allow young men and women an opportunity to explore the teaching profession. The organization was created in 1984 to provide the best and brightest high school and middle school students in Texas with the necessary knowledge to make informed decisions about pursuing careers in education.

Get more information, including videos, 360 degree camera views, and more for each CTE Program of Study by visiting...



smcisd.net/cte



Courses: Teaching & Training

Principles of Education & Training

Course Number: 6315 Offered in: 9-12 Credits: 1 credit Prereq: None

This course is designed to introduce students to the various careers within & Training the Education field. Students use self-knowledge as well as educational and career information to analyze various careers and the societal influences on education and various school models. Additionally, students learn the role and responsibilities of a classroom educator. Students will develop a graduate plan that leads to a specific career choice of the student's interest.

Human Growth & Development

Course Number: 6314 Offered in: 10-12 Credits: 1 credit Prereq: Prin of Ed & Training

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

Instructional Practices

Course Number: 6305 Offered in: 11-12 Credits: 2 credits Prereq: Human Growth & Dev.

This course is field-based and provides students with background knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students work under joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators in direct instructional roles with students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, and perform other duties of teachers

Practicum in Education & Training

Course Number: 6306 Offered in: 11-12 Credits: 2 credits Prereq: Inst. Practices

This course is field-based and provides students further knowledge of child and adolescent development as well as principles of effective teaching and training practices. Students continue to work under the joint direction of their classroom teacher and exemplary educators in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and perform other duties of various educators.





Middle School CTE

Umbrella Programs

Goodnight and Miller Middle Schools have the opportunity to begin study in most CTE Programs of Study thanks to the CTE Umbrella Programs available on their campus. These classes allow students to experience the type of instruction, projects, and learning that will take place if they select certain CTE programs at SMHS in the future.

Students must first take an Introduction course (open to 7th and 8th graders), then they may take a Principles course (open only to 8th graders that completed the Introduction course) that counts as HS credit.

Human Services Umbrella

Connected HS CTE Programs of Study:

- Culinary Arts
- Cosmetology
- Fashion Design
- Teaching & Training

7th/8th graders:

Introduction to Human Services

8th Graders:

Principles of Human Services

Manufacturing Umbrella

Connected HS CTE Programs of Study:

- Applied Ag Engineering (welding)
- Automotive Technology
- Collision Repair
- Construction

7th/8th graders:

Introduction to Manufacturing

8th Graders:

Principles of Manufacturing

Technology Umbrella

Connected HS CTE Programs of Study:

- Digital Communications
- Info Tech Support & Services
- Programming & Software Develop.
- Robotics

7th/8th graders:

Introduction to Technology

8th Graders:

Principles of Technology

Get more information, including videos,
360 degree camera views, and more
for each CTE Program of Study by
visiting...



smcisd.net/cte

