



Course Overview

January 2018

Madison County Schools and Madison Career and Technical Center do not discriminate on the basis of race, color, national origin, religion, sex, age, or handicapping condition.

Automotive Service I and II



Prerequisites	C average in previous math and English course and a TABE reading score of 8.0 or higher
Credits	Two elective credits each year
Certifications	Automotive Skills Excellence (ASE) – Student Certification
Student Organization	Skills USA and Technology Student Association (TSA)

Automotive Service I and II

Automotive Service I

- ▣ Automotive Shop Operations
- ▣ Engine Repair
- ▣ Transmissions
- ▣ Basic Electrical/Electronic Systems
- ▣ Automotive Brakes

Automotive Service II

- ▣ Automotive Shop Operations Review
- ▣ Advanced Electrical/Electronic Systems
- ▣ Engine Performance
- ▣ Advanced Engine Performance
- ▣ Automotive Heating and Air

Construction I and II



Prerequisites	C average in previous math and English course
Credits	Two elective credits each year
Certifications	National Center for Construction Education Research – Construction Core and Carpentry Certifications
Student Organization	Skills USA

Construction I/ Construction II (Carpentry)

Construction I

- ▣ Introduction and Orientation
- ▣ Basic Safety
- ▣ Basic Math
- ▣ Hand and Power Tools
- ▣ Introduction to Blueprints
- ▣ Introduction to Materials Handling
- ▣ Introduction to Carpentry
- ▣ Introduction to Electrical Wiring
- ▣ Introduction to Masonry
- ▣ Introduction to Plumbing

Construction II

- ▣ Orientation (Review)
- ▣ Basic Safety (Review)
- ▣ Construction Math
- ▣ Introduction to Materials Used in Construction
- ▣ Footing, Foundation, and Floor Framing
- ▣ Wall, Ceiling, and Roof Framing
- ▣ Windows, Doors, and Stairs

Digital Media Technology I and II



Prerequisites	Overall B average and completion of STEM and Freshman Focus
Credits	Two elective credits each year <i>*One credit for Digital Media Technology II may count as an Art credit for graduation.</i>
Certifications	Adobe Certified Associate (ACA) in Photoshop
Student Organization	Technology Student Association (TSA)

Digital Media Technology

Digital Media Technology I

- ▣ Introduction, Safety, and Orientation
- ▣ Photography and Photo Editing
- ▣ Print Production and Design
- ▣ Introduction and Editing for Audio Production
- ▣ Finalizing Audio Production
- ▣ Media-Rich Content Design

Digital Media Technology II

- ▣ Introduction, Safety, and Orientation
- ▣ Preparing to Edit
- ▣ Telling the Story
- ▣ Editing Basics
- ▣ Finishing the Product
- ▣ Discovering Motion Graphics
- ▣ Basic Animation
- ▣ Designing Effects and Graphics
- ▣ Fundamentals of 3D to Motion Graphics

Engineering and Robotics I and II



Prerequisites	C average of above in Algebra I
Credits	Two elective credits each year <i>*The two credits for Engineering and Robotics II may count as science credits for graduation.</i> <i>*One credit for Engineering and Robotics II may count as a Physics credit for graduation and IHL admittance.</i>
Certifications	SolidWorks Certified Associate FANUC Robotics Certification
Student Organization	Technology Student Association (TSA)

Engineering and Robotics

Engineering and Robotics I

- ▣ Orientation, Ethics, and Safety
- ▣ Engineering Design Process, History, and Careers
- ▣ Industrial Engineering Focus
- ▣ Civil Engineering Focus
- ▣ Sketching and Modeling
- ▣ Introduction to Robotics
- ▣ Environmental Engineering Focus
- ▣ Electrical Engineering Focus
- ▣ Computer Engineering Focus

Engineering and Robotics II

- ▣ The Four Systems: Electrical Systems
- ▣ The Four Systems: Fluid Systems
- ▣ The Four Systems: Mechanical Systems
- ▣ The Four Systems: Thermal Systems
- ▣ Flexible Manufacturing System (FMS)
- ▣ Advanced Robotics
- ▣ Workforce Readiness

Health Science Core (Year1) and Healthcare and Clinical Services (Year 2)



Prerequisites	C average in Biology I and previous math and English course
Credits	Two elective credits each year <i>* Students may use .5 of the two credit earned for Health Science Core as the Health requirement for graduation. The two credits earned for Healthcare and Clinical Services (Year 2) may count as science credits for graduation.</i>
Certifications	National Health Science Assessment Mississippi Certified Nursing Assistant (CNA) Pharmacy Technician
Student Organization	Health Occupations Students of America (HOSA)

Health Science Core (Year 1) and Healthcare and Clinical Services (Year 2)

Health Science Core (Year 1)

- Course Orientation and Professional Associations
- Safety and Infection Control
- Healthcare Systems, Legal and Ethical Practices
- Communication and Teamwork
- Body Organization, Covering, Support, and Movement
- Vital Organs and Protections
- Intake and Elimination
- Control, Regulation, and Coordination
- Reproduction and Health Maintenance Practices

Healthcare and Clinical Services (Year 2)

- Course Orientation, Safety Review, Clinical Procedures, and Employability
- Emergency Services and Technical Skills
- Human Growth and Development
- Rehabilitative Services
- Medical and Nursing Services
- Therapeutic Services
- Pharmacological and Diagnostic Services
- Information Technology and Health Informatics

Healthcare and Clinical Services (Year 2) – CNA Option



- **Seniors** who enroll in Healthcare and Clinical Services (Year 2) may choose to enroll in the CNA Option.
- The CNA Option allows students to become a Mississippi Certified Nursing Assistant at the end of their senior year if they pass the state licensing examination.
- This option is beneficial to any student who is pursuing nursing as a career or any student who would like to work in the medical field while attending college.
- The additional cost for the CNA Option is \$101 per student.

Healthcare and Clinical Services (Year 2) – Pharmacy Tech Option



- **Seniors** who enroll in Healthcare and Clinical Services (Year 2) may choose to enroll in the Pharmacy Tech Option.
- The Pharmacy Tech Option allows students to become a pharmacy technician at the end of their senior year if they pass the licensing examination.
- This option is beneficial to any student who is interested in pharmacy as a career.
- The additional cost for the Pharmacy Tech Option is \$379 per student.

Simulation and Animation Design I and II



Prerequisites	Overall B average and completion of STEM and Freshman Focus
Credits	Two elective credits each year
Certifications	TBD
Student Organization	Technology Student Association (TSA)

Simulation and Animation Design I and II

Simulation and Animation Design I

- ▣ Introduction, Safety, and Orientation
- ▣ Ethics in the Game Design Industry
- ▣ Games and Society
- ▣ Game Design Theory and Mechanics
- ▣ Photography for Game Design
- ▣ Artistic Rendering Using Illustration Software
- ▣ Design Visualization Software Introduction
- ▣ Geometry in Design Visualization Software
- ▣ World Design Using Design Visualization Software
- ▣ Character Development and Animation

Simulation and Animation Design II

- ▣ Audio Design
- ▣ Video Game Programming
- ▣ Video Game Production
- ▣ Business of Gaming
- ▣ Simulation and Animation Design Seminar and Experience
- ▣ Game Evaluation

Teacher Academy I and II



Prerequisites	<ul style="list-style-type: none">• Proficient or advanced 8th grade MCT scores in Language Arts and Mathematics• 92% attendance rate• Overall B average• Must complete an application, essay, and interview• Must list Education and Training as chosen career cluster on the iCAP
Credits	Two elective credits each year
Certifications	NA
Student Organization	Educators Rising

Teacher Academy I and II

Teacher Academy I

- Orientation and Safety
- Teaching Career Opportunities
- Human Growth and Development
- History and Trends in American Education
- Effective Teaching and Learning Environment
- Appreciating Diverse Learners

Teacher Academy II

- Instructional Strategies
- Assessment Strategies
- Instructional Planning
- Field Experiences
- Professional Learning

Special Awards and Recognition



National Technical
Honor Society



Career Pathway Experience