

### World Geography-

Grade Levels: 9

Credit: 1

Prerequisite: None

The study of world geography provides students with the opportunity to explore the relationship between people and the land on which they live. As students begin to understand that all events affecting society occur within a geographical context, they will discover how geography has influenced the development of the world's various cultures and economies. The study of geography will better prepare students to understand the planet on which they live and the people who share its resources.

### Advanced Placement United States History-

Grade Levels: 11, 12

Credits: 2 (1 for A/B and 1 for C/D)

Prerequisites: Teacher recommendation

AP U.S. History is a college-level course that traces America's past from pre-discovery to post-World War II in an in-depth manner. Students earn high school credit and may earn college credit by taking the Advanced Placement Examination. Discussion/essay format testing is used as well as extensive reading, historical and analytical essays, research assignments and debate style discussions. Critical and analytical thinking is an imperative aspect of the course. (STUDENTS MUST COMPLETE ALL ASPECTS OF THIS COURSE TO EARN THE U.S. HISTORY REQUIREMENT FOR GRADUATION.)

## CAREER AND TECHNICAL COURSES

### AGRICULTURE EDUCATION

#### Principles of Agriculture-

Grade Levels: 9

Credit: 1

Prerequisite: None

Principles of Agriculture is designed to develop the basic theories and principles involved in animal science, agribusiness, agricultural mechanics, and natural resource management. The standards prepare students to choose among agricultural careers for the 21<sup>st</sup> century.

#### Greenhouse Management-

Grade Levels: 9, 10, 11, 12

Credit: 1 or 2

Prerequisite: None

Greenhouse Management sets a foundation for progress in the horticulture sub-cluster area. As populations continue to expand, the importance of food production in a condensed, climate-controlled environment increases. Understanding the integrated principles needed for the successful management of a greenhouse will allow the agricultural industry to continue to produce the quality and quantity of food and fiber needed in the 21<sup>st</sup> century.

### **Agriculture Mechanics and Maintenance-**

**Grade Levels:** 10, 11

**Credit:** 1

**Prerequisite:** Principles of Agriculture

Agricultural Mechanics includes standards to prepare students for operational procedures for a shop or a home environment. Students learn basic skills in areas ranging from welding and electricity to land measuring to plumbing. As students live in the 21<sup>st</sup> century, they need to have skills that can be used in a rural or an urban environment.

### **Leadership-**

**Grade Levels:** 10, 11, 12

**Credit:** .5 or 1

**Prerequisite:** Principles of Agriculture

Analyzes attributes and capabilities of those in leadership positions, to assist students in the development of their interpersonal relationships and other related skills. Most jobs are lost or gained because of the leadership ability a person has. In a global marketplace, these skills will become more important as an asset for career success.

### **Ag Power and Equipment-**

**Grade Levels:** 11, 12

**Credit:** 1

**Prerequisites:** Ag Mechanics & Maintenance

Agricultural Power and Equipment includes basic information and laboratory activities on small engines, tractors, and agricultural equipment maintenance, repair, and overhaul. The standards address competencies for electrical motors, hydraulic systems, and fuel-powered engines.

### **Principles of Agricultural Engineering-**

**Grade Levels:** 12

**Credit:** 1

**Prerequisite:** Ag Mechanics & Maintenance and Ag Power & Equipment

Principles of Agricultural Engineering include standards on metal fabrication and agriculture structures. Subject matter will include hot/cold metal work, cost and material computation, electric wiring and codes, engine service and repair, blueprint reading and drawing, and selection of appropriate materials for projects.

## **BUSINESS AND INFORMATION TECHNOLOGY**

### **Computer Applications-**

**Grade Levels:** 9, 10

**Credit:** 1

**Prerequisite:** None

This course is designed to develop computer technology skills. Students will use a variety of computer software and hardware tools and features of an electronic information network. Students will explore the historical, social, and ethical issues of using computer technology. Students will develop skills that will assist them with efficient production, accurate production analysis, management of information, and design and presentation of a multimedia project.

### **Desktop Publishing-**

**Grade Levels:** 10, 11, 12

**Credit:** 1

**Prerequisite:** Computer Applications

The student will develop skills in electronic publishing design, layout, composition, and paste-up. The techniques will be applied in creating and formatting various publications that require imported data/graphics using resources such as the Internet, scanner, etc. The student will research and apply copyright laws, ethical practices, and language arts skills with reference to electronic publishing.

### **Interactive Multimedia Presentation-**

**Grade Levels:** 11, 12

**Credit:** 1

**Prerequisite:** Computer Applications and Desktop Publishing

The student will apply keying, typography, layout, and design skills in this course. The student will be proficient in using interactive multimedia tools to develop electronic presentations. Creative design, persuasive communications, and language arts skills are applied through research, evaluation, validation, written, or oral communication. Typography layout, and design guidelines are applied. Copyright laws and ethical practices are reinforced in creating and formatting various presentations that require imported data/graphics, etc. Team development will also be stressed as students work on multimedia project(s). Laboratory facilities and experiences simulate those found in business and industry.

### **Advanced Computer Applications-**

**Grade Levels:** 11, 12

**Credit:** 1 to 2

**Prerequisites:** Computer Applications, Desktop Publishing, and Interactive Multimedia Presentation

This is a capstone course in which students will learn necessary skills in problem-solving using current and emerging integrated technology to include a variety of input technologies in the production of professional quality business documents and presentations. The course focuses on student choice, accountability, and performance. Students increase their employability by working toward the attainment of high-level skills in the areas of integrated software applications, communication skills, ethical issues, human relations, leadership, self-management, and workplace management. Students may choose areas of specialization and achieve industry certification in areas such as word processing, spreadsheet applications, multimedia presentations, schedule and contact management, etc. This course may articulate to post-secondary education.

## **FAMILY AND CONSUMER SCIENCES**

### **Family and Consumer Sciences-**

**Grade Levels:** 9, 10

**Credit:** 1

**Prerequisite:** None

This is a comprehensive foundation course designed to assist students in developing core knowledge and skills needed for successful life planning and management. Content includes human development; family and parenting education; resource management; housing and living environments; nutrition and foods; textiles and apparel; leadership development; and career preparation. A unique focus is on the

management of families, work, and their interrelationships. The course provides a foundation for further study in specialized related career areas.

### **Child and Lifespan Development-**

**Grade Levels:** 10, 11, 12

**Credit:** 1

**Recommended Prerequisite:** Family and Consumer Science

This course prepares students to understand the physical, social, emotional, and intellectual growth and development throughout the lifespan. Experiences such as laboratory observations and laboratory participation will enhance the learning process. Instructional content includes child development theories and research; prenatal development; infants and toddlers; preschool years; middle childhood; adolescence; adulthood; geriatrics; death and dying; careers; and leadership, citizenship, and teamwork.

### **Life Connections-**

**Grade Levels:** 11, 12

**Credit:** 1

**Recommended Prerequisite:** Family and Consumer Science and Child and Lifespan Development

Life Connections is designed to assist students in making a successful transition from high school into the post-high school environment. Students will be empowered to take action for the well being of themselves and others as they effectively manage the roles and responsibilities created by family, career, and community interactions. Content includes career preparation; communication skills; money management; housing; textiles and apparel; and nutrition and foods.

### **Teaching as a Profession-**

**Grade Levels:** 11, 12

**Credit:** 1

**Prerequisites:** None

Teaching as a Profession is a course designed to capture the interest of secondary students as potential teachers, introduce students to teaching as a profession, and foster respect for the teaching profession. Students will gain knowledge and skills that will establish a foundation for a successful pathway to a teaching career. Content includes history and current issues of education; human growth and development; teaching career opportunities and preparation; and components of instruction. Students will learn through classroom observations and experiences working hands-on with children, and the development of a professional portfolio. Students will complete a work-based learning internship at the elementary, middle, or high school level.

## **HEALTH SCIENCE OCCUPATIONS**

### **Health Science Education-**

**Grade Levels:** 9, 10

**Credit:** 1

**Prerequisite:** None

This course will include basic health care information on services/products related to the health of people or animals. Subject matter will include career choices, skill development, and application of health concepts relative to becoming a health care professional.

### **Diagnostic Medicine-**

**Grade Levels:** 10, 11, 12

**Credit:** 1

**Prerequisite:** Health Science (may take at same time)

Diagnostic Medicine creates a picture of an individual's health status at a single point in time. This could include careers as audiologist, cardiology, imaging, medical laboratory, radiography, nuclear medicine, stereotactic radiosurgery, respiratory therapist, clinical laboratory technician, pathologist, medical physician, histotechnologist, prosthodontist, and others.

### **Anatomy and Physiology-**

**Grade Levels:** 11, 12

**Credit:** 1

**Prerequisite:** Health Science

Human anatomy and physiology functions are assessed. Descriptive results of abnormal physiology will be examined and clinical consequences will be evaluated. A workable knowledge of medical terminology will be demonstrated. Rehabilitative therapy provides career options, diagrams human structure, and describes human functions. It also provides organizational skills, assesses patient history, and applies appropriate multi-disciplinary therapies for medical conditions.

### **Emergency Medical Services-**

**Grade Levels:** 11, 12

**Credits:** 1

**Prerequisites:** Health Science

Emergency Medical Service is designed for students interested in a career in pre-hospital or emergency patient care. Career options may include emergency room physician, emergency medical technician, paramedic, or emergency room nurse.

### **Forensic Science-**

**Grade Levels:** 11, 12

**Credit:** 1

**Prerequisites:** Health Science

This course is an overview of how science is applied to solving crimes. Topics include history of forensic sciences, collecting of evidence, analyzing results, and hands-on applications of many laboratory techniques used in solving crimes.

### **Medical Therapeutics**

**Grade Levels:** 10, 11, 12

**Credits:** 1

**Prerequisites:**

This course provides knowledge and skills to maintain or change to the health status of an individual over time. This could include such careers or career areas as dental, dietetics, medical assistance, home health, nursing, pharmacy, respiratory, social work, nutritionist, physician, psychiatrist, psychologist, veterinarian, gerontology service provider, medical practice owner, attorney for health care.

# SCIENCE, TECHNOLOGY, ENGINEERING, MATH (STEM)

## Foundations of Technology

Grade Levels: 9, 10, 11, 12

Credits: 1

Prerequisites:

Foundations of Technology uses group and individual projects to prepare students to understand and apply technological concepts and processes. Activities engage students in creating ideas, developing innovations, and engineering practical solutions. Technology content, resources, and laboratory/classroom activities apply student applications to science, mathematics and other school subjects in authentic situations.

## Technological Issues

Grade Levels: 9, 10, 11, 12

Credits: 1

Prerequisites: Foundations of Technology

This course will actively engage students in making, developing, using and managing technology systems. Students will use hands on projects to research, design & problem solve solutions to technological development. They will better understand the role of systems in meeting specific needs and will understand their operation.

## OTHER COURSE OFFERINGS

### Dual Enrollment Opportunities

Grade Levels: 11, 12

Locations: Columbia State Community College/Distance Learning at MPHS, TTC-Hohenwald, Northfield, and Centers of Excellence through the Maury County Board of Education

Prerequisites: 3.0 GPA or ACT reading, math, and composite scores of 19 to enroll in math or science courses at CSCC; 3.0 GPA or ACT reading and composite scores of 19 to enroll in non-math or non-science courses at CSCC. None for enrollment at TTC-Hohenwald, Northfield, or Centers of Excellence through the Maury County Board of Education.

CSCC- Dual enrollment allows high school students who rank above average in academic achievement to enroll in Columbia State classes and receive both college credit and high school credit for these classes. Parental permission is required. Tuition must be paid to CSCC and a copy of the receipt submitted to guidance counselor before MPHS registration procedures are finalized. Students must provide their own transportation.

TTC-Hohenwald- See guidance for information on classes offered. Students must provide their own transportation.

Northfield- The following courses are offered at the Northfield Learning Center in Spring Hill:

Advanced Integrated Industrial Technology (CSCC) Students will be trained for the world of high-tech manufacturing with courses in electricity, hydraulics, pneumatics, and robotics, utilizing training equipment, lab work, and troubleshooting and problem-solving scenarios.

Automotive Technology and Industrial Maintenance (TTC-Hohenwald) This course will provide training in the methods of servicing and repairing automotive vehicles by emphasizing technical instruction and skill development in the automotive field, as well as the proper factory-approved methods of servicing, repairing, and maintaining vehicles. The student will also learn how to use diagnostic equipment, precision measuring tools, service manuals, and specifications.