

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.

Machine Tool Technology (TTC-Pulaski) This course provides students with a broad range of experience of all machine tools used in working as a Machinist, Tool and Die Maker, Industrial Maintenance, Machine Operator, etc. Instruction will be given in safety, blueprint reading, mathematics, manual milling and turning machines, drill presses, grinders, wire EDM machines, CNC lathes, and milling equipment. Other areas covered are layout work, precision measuring, and metallurgy.

Phlebotomy (TTC-Pulaski) Phlebotomy is defined as making an incision (or cut) into a vein for the purpose of drawing blood for diagnostic or medical testing. This is also called venipuncture. The goal of the phlebotomy program is to have students learn and perfect these skills through clinical rotations at various area healthcare facilities. Students will also have the opportunity to practice these skills on a simulator in the laboratory setting during instructional time. It is our goal to prepare students to enter the workforce after adequate instruction and supervised skill experience. The program can be completed in less than a quarter. Each student must have a clean background check and negative drug screen. Specific immunizations must be taken or proof of previous vaccinations must be provided. Students must be 18 years old and be able to attend an entire day. There are no part-time student opportunities. Upon successful completion of the program, the student can take the National Certification exam to become certified.

Solar Photovoltaic Technology (TTC-Pulaski) The solar training program teaches the basics of understanding and installing code-compliant solar energy systems for those who wish to be employed in the green renewable energy industry. Students will learn the practical theory, design criteria, installation guidelines, safety issues, and maintenance principles of photovoltaic solar systems.

Call Center Support Specialist (TTC-Pulaski) Call the Tennessee Technology Center in Pulaski for more information.

Centers of Excellence through the Maury County Board of Education- Cosmetology/Columbia Central; Construction Trade/Columbia Central; Graphic Communications/Columbia Central; Criminal Justice/Columbia Central; Health Science/Certified Nursing Assistant class/Spring Hill; Information Technology/Spring Hill. See guidance for application. Students must provide their own transportation.

Jobs For Tennessee Graduates (JTG)

Grade Levels: 12

Credit: 1

Prerequisite: Eligibility for program participation to be determined by career advisor.

This is a career class offered in partnership with the Department of Education and Labor and Workforce Development. Students will gain personalized job and career readiness training as well as boosts to self esteem. Students participate in leadership, teammanship and personal development and learn soft skills for the work place. Students acquire skills that enable them to better interact and communicate successfully with their instructors, peers and potential employers as well as learn to apply maturity to the decision making process. Post-graduation assistance is available to all participants.

Personal Finance Online-

Grade Levels: 10, 11, 12

Credit: .5

Prerequisites: Internet access, ability to stay on task without constant supervision; must have approval from the guidance counselor.

This course was developed by the Maury County School System to provide an online educational experience for high school students. This course is recommended to any student in grades 10-12 who has the ability and need to work independently on studies outside the normal classroom. All regular state standards for the course are covered. Students who complete this study successfully will receive the

needed ½ credit for graduation in the state of Tennessee. The completion of this course should occur within a regular nine-week time frame. Personal Finance is a course designed to help students understand the impact of individual choices on occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. This course will provide a foundational understanding for making informed personal financial decisions.

Remediation Study Skills

Grade Levels: 9, 10, 11, 12

Credit: Non-credit. Credit earned during class time by completion of individual coursework with the use of PLATO software.

Prerequisite: Any student who has not successfully completed a course. Teacher/parent recommendation.

Vanguard Academy

Grade Levels: 11, 12 Priority given to students currently in 4th year of high school having possibility of graduation with peers by earning credits through Credit Recovery, and Credit Retrieval. Consideration given to students not currently in correct graduation class after two years in high school (i.e. 3rd year student currently in 9th or 10th grade).

Credit: non-credit for class. Credits earned during classroom time by completion of individual course work as indicated on student contract completed prior to enrollment in Academy.

Prerequisite: Must be 17 during school year enrolled in Academy; must be behind in years in high school placement due to failure to earn necessary credits for years enrolled and/or not able to complete high school within 4 years; must complete all prerequisite evaluations and have approval of parent(s)/guardian(s), guidance counselor, principal, and designated Central Office School Board staff on signed contract outlining all specifics for course work and number of credits required for graduation. Materials covered for each specific course assigned to individual student as outlined in Tennessee State Standards and Course Curriculum; course work is technology-based through use of PLATO software. See Mrs. McWilliams for application.