



## STEM Academy

*Arthur R. Sypek Center*

In September 2015, the Mercer County Technical School District launched a full-time, 4-year STEM Academy. The STEM Academy will deliver academically challenging and rigorous curriculum including Project Lead The Way, an activity-, project-, and problem-based curriculum. Students will work toward the completion of college credit and industry credentials while in high school. Student learning will be enhanced through key business partnerships allowing for multiple workplace readiness and experiential learning opportunities. In this specialized learning environment, students will apply what they know, identify problems, find unique solutions, and lead their own learning.

### OCCUPATIONAL OUTLOOK

Employment in occupations related to STEM—science, technology, engineering, and mathematics—is projected to grow to more than 9 million between 2012 and 2022.

### RELATED CAREERS

Architectural and engineering managers, atmospheric and space scientists, computer occupations and machinists.

### SKILLS/KNOWLEDGE

Decision making skills, leadership skills, math skills, organizational skills, problem-solving skills, speaking skills, writing skills.

### SKILLS /KNOWLEDGE

- Produce designs and drawings using computer drafting programs
- Use numerical, spatial, and logistics to solve problems
- Work with robotics, coding, computer and electronic systems

Source: [www.bls.gov](http://www.bls.gov)

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# 2020-2021

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# STEM Academy

## Scope & Sequence of Courses

Core	Grade 9	Grade 10	Grade 11	Grade 12
<b>English</b>	English	English II	English III	ENG101 English Composition (3 Credits)
<b>Social Studies</b>	World History	US History I	US History II	
<b>World Language/ Other</b>	World Language	World Language	Financial Literacy	MET123 Machine Shop Techniques I Fall (3 Credits)  MET124 Machine Shop Techniques II Spring (3 Credits)
<b>Science</b>	BIO113 The Biology of the Organism (3 credits)	Chemistry	Physics	EET130 Fundamentals of Electronics (4 Credits)
<b>Mathematics (*)</b>	Algebra I	Geometry	Algebra II	MAT146 Pre Calculus Fall (3 Credits)  ECO103 Basic Economics Spring (3 Credits)
<b>Physical Education</b>	Fitness & Health I	Fitness & Health II and Drivers Education	Fitness & Health III	HPE111 Living with Health (3 Credits)
<b>STEM</b>	Introduction to Engineering Design (Project Lead the Way)	Principles of Engineering (PLTW)  Digital Electronics (PLTW) (Possible Credit)	Computer Science (PLTW)	Engineering Design and Development (PLTW)
	DRA190 Introduction to Computer-Aided Drafting Spring (2 Credits/Art Elective)	DRA218 3D Modeling/Printing (3 credits)	MET122 Industrial Measure- ments (3 Credits)	Senior Internship/CIE Placement (Possible Credit)

MCCC Credits earned: 33+ credits

High School Credits: satisfied

\* Students may be accelerated based upon level