Engineering (Automation)

Automation Engineering Pathway

Engineering I
Engineering II
Manufacturing Engineering
Mechatronics Engineering
Unmanned Aircraft Systems

Engineering I ET 210-221

Grade Level: 9-12
Credit: 1
Prerequisite: None
Description: This course applies the skills, concepts, and principles of engineering. Students explore various technological systems and engineering processes in related career fields. Topics include investigating technological system, design optimization, and problem solving. Students utilize CAD and physical and virtual modeling concepts to construct, test, collect, and report data. Participation in Kentucky Technology Student Association will greatly enhance instruction.

Engineering II ET 210-222

Grade Level: 10-12
Credit: 1
Prerequisite: None
Description: A project and research based course that extends the learning experiences where students focus on mechanical, electrical, fluid and thermal systems allowing in depth exploration in selected disciplines of engineering areas such as manufacturing, power/energy/transportation, bio-medical, robotics, hydraulics, electricity/electronics, communications, construction systems, alternative energy, computer aided design and problem solving. Participation in Kentucky Technology Student Association will greatly enhance instruction.

Manufacturing Engineering ET 210-225

Grade Level: 10-12
Credit: 1
Prerequisite: Engineering I or Engineering II
Description: This is a comprehensive course designed for the study of general concepts and principles of manufacturing and manufacturing systems. This course provides for hands-on learning experience which enhances the understanding of various metallic/nonmetallic materials, processes, and products. Materials studied may include polymers, ceramics, woods, composites, and metal materials associated with manufacturing Students have the opportunity to engage in product design, prototyping, computer-assisted manufacturing applications, CNC machines, robotics, and production management. Participation in Kentucky Technology Student Association will greatly enhance instruction.

Manufacturing Engineering ET 210-225

Grade Level: 10-12
Credit: 1
Prerequisite: Engineering I or Engineering II
Description: This is a comprehensive course designed for the study of general concepts and principles of manufacturing and manufacturing systems. This course provides for hands-on learning experience which enhances the understanding of various metallic/nonmetallic materials, processes, and products. Materials studied may include polymers, ceramics, woods, composites, and metal materials associated with manufacturing Students have the opportunity to engage in product design, prototyping, computer-assisted manufacturing applications, CNC machines, robotics, and production management. Participation in Kentucky Technology Student Association will greatly enhance instruction.

Unmanned Aircraft Systems ET 210-238

Grade Level: 10-12
Credit: 1
Prerequisite: Engineering I or Engineering II
Description: This course provides students with the foundation in content and skills associated with robotics and automation, including artificial intelligence, electronics, physics, and principles of engineering. Participation in Kentucky Technology Student Association will greatly enhance instruction