



# Sumter Career and Technology Center

## SIEMENS ENGINEERING DESIGN



Siemens Engineering challenges students to solve complex design problems. Students research, design, develop, and communicate design solutions. Students will use engineering software to prepare and evaluate designs and make extensive use of 3D printing to prepare models for presentation to authentic audiences. The goal of the program is the application of the tools to address unique problems allowing the students to rapidly create and analyze proposed solutions.

### Four Courses

#### Siemens Engineering Design

This course challenges students to work in teams to solve complex design problems. Students research, design, develop, and communicate design solutions. Teams use engineering software to prepare and evaluate designs and make extensive use of 3D printing to prepare models for presentation to authentic audiences.

#### Siemens Manufacturing and Automation

This course provides students with experience in the creation of a design, preparing the design for machining and designing the automation necessary to control processes. This course in manufacturing that will challenge the students to collaboratively solve design problems by working in teams, require research and report findings.

#### \*Siemens Mechatronics and the Internet of Things

This course is designed to provide students with a broad understanding of how different systems work together. It will engage students in the application of design, electricity/electronics, computer science, manufacturing, automation, machine learning, AI and secure machine to machine communications across the internet.

#### \*Siemens Engineering Research and Development

Students are challenged to identify, research, and create a unique solution to an existing problem. Teams will gauge market interest in their proposed solution and will be responsible for developing and documenting the research as it applies to the creation of a prototype solution to their identified problem. Student teams design a business model for creation of the product and apply lean design.



\*Honors Weighted Courses