

Career & Technical Education

Robotics & Automation Technology

- Level 1
- Principles of Applied Engineering
 - Principles of Manufacturing

- Level 2
- Manufacturing Engineering Technology I
 - Robotics I

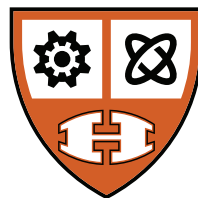
- Level 3
- Engineering Design & Presentation I
 - Robotics II

- Level 4
- Practicum in Manufacturing

Certification(s)

- Autodesk Certified User - Inventor
- FANUC Robot Operator I

Student Organization



**CAREER & TECHNICAL
EDUCATION** HUTTO ISD

ROBOTICS

Course Information - Robotics & Automation Technology

Course Title	Credits	Prerequisites	Course Description
Principles of Applied Engineering	1.0	None	Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.
Principles of Manufacturing	1.0	None	In Principles of Manufacturing, students are introduced to knowledge and skills used in the proper application of principles of manufacturing. The study of manufacturing technology allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities. Students will gain an understanding of what employers require to gain and maintain employment in manufacturing careers.
Manufacturing Engineering Technology I	1.0	None	In Manufacturing Engineering Technology I, students will gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Students will prepare for success in the global economy. The study of manufacturing engineering will allow students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting.
Robotics I	1.0	None	In Robotics I, students will transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.
Engineering Design & Presentation I	1.0	Algebra I	Engineering Design and Presentation I is a continuation of knowledge and skills learned in Principles of Applied Engineering. Students enrolled in this course will demonstrate knowledge and skills of the design process as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.
Robotics II	1.0 (Math)	Robotics I	In Robotics II, students will explore artificial intelligence and programming in the robotic and automation industry. Through implementation of the design process, students will transfer academic skills to component designs in a project-based environment. Students will build prototypes and use software to test their designs.