

## General Course Information

<b>Course Name: Robotics</b>	
Department: Technology & Engineering	Grade Level(s): 10-12
Duration/Credits: 1 year/ 1.0 credits	Prerequisites: successful completion of or concurrent enrollment in Personal Finance recommended
BOE Approval Date:	Course Code: H4227
<b>Course Description:</b>	
<p>Robotics is a hands-on learning experience in which students combine theory and practice. Students in Robotics will design, build, wire, and program functioning robots. They will learn marketing, soft skills, goal-setting, and time-management as they explore all facets of the business of technology. Students in Robotics will have the option to compete in regional and national competitions and may become members of TSA/Robotics club.</p>	
<b>Course Rationale:</b>	
<p>Robotics encourages young people to be science and technology leaders and well-rounded contributors to society. The course is team-oriented while allowing personal growth and development of the individual student and his or her skill sets within and around the STEM fields.</p>	
<b>Course Objectives:</b>	
<ul style="list-style-type: none"><li>• The student will properly document the progression of projects in the course, including design process, mathematical thinking, business plans, drawings, and reflections in a written journal/notebook. (A+ Writing)</li><li>• The student will give and receive feedback on projects, journal entries, and business plans. (A+ Speaking and Listening)</li><li>• The student will collaborate to create community networks and partnerships to practice soft skills (such as communication, locating resources, developing mentors) and support the robotics program.</li><li>• The student will design and manufacture a fully-functioning robot capable of solving real world problems within given constraints.</li><li>• The student will research problem-solving approaches to determine the appropriate mathematical, engineering, and planning strategies to apply to the manufacture and programming of the robot. (A+ Research)</li><li>• The student will maintain a safe and clean working environment.</li></ul>	

- The student will read and interpret technical journals, blueprints, and grant applications. (A+ Reading)
- The student will collaborate with fellow students to write applications and apply for grants.
- The student will follow all safety procedures and rules in the shop environment.

**Standards Alignment:**

Course is from FIRST - (For Inspiration & Recognition of Science and Technology)