ROBOTICS

Computer Science / Engineering / Manufacturing Pathway

This Pathway is designed to give students experience in a large variety of career opportunities. As students build robots for multiple applications, they are exploring computer science, engineering, and manufacturing. Programmers, fabricators, and engineers from industry work with students to build robots for national competitions. All classes are hands-on and project based. Students begin learning fundamentals and progress through advanced classes as far as they chose to go.

Classes in the pathway

Applied Physics

This is the first course in the pathway. Students learn how to apply fundamental physics theory to various hands-on projects. Problem solving and critical thinking are emphasized. From this class students have 3 choices on what to take next. Manufacturing Technology can be taken at the same time as either Applied Physics II or Robotics Engineering.

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Applied Physics II

Students in this class will learn the fundamentals of wireless robotics. Students will apply computer science and electronics theory to designing and building wireless robots. This class is a year long science, math, or occupational education credit.

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Manufacturing Technology

Students will learn how to use computer aided design to fabricate parts on 3D printers, laser cutters, and computer numerically controlled machines. Current manufacturing processes will be used to manufacture parts. This class is a semester long. It is an elective credit.

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Robotics Engineering

Students interested in high level competition robotics will chose this class. Opportunities range from beginning level robots to the highest level of high school robotics in the world. Students may take manufacturing technology at the same time as robotics engineering. Robotics engineering may be repeated for credit.