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## Introduction to Robotics

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## Introduction to Robotics Course Description

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Introduction to Robotics is a hands-on, robotics based course that will use the TETRIX® MAX robotics platform to introduce you to the world of robotics and automation through a series of real world problem solving challenges. Students enrolled in Introduction to Robotics will be exposed to a variety of high demand STEM (science, technology, engineering, mathematics) careers while developing skills in areas of design, assembly, modification, programming and operation of a robotics system.

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## Introduction to Robotics Course Outline

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- Basic Chassis
- Drive Trains
- Movement
- Arms and Grippers
- Harvester and Transporters
- Dispensers
- Launchers
- Basic Movement
- Sensors
- Line Follower

\*Students will also have the opportunity to become proficient in 3D modeling and assemblies and 3D printing

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# Introduction to Robotics Expectations

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Project Lead the Way's Pathway to Engineering program is a pre-professional program. Participants in this program will be held to the highest academic and behavior standards.

## Academic expectations include:

- Preparing for class and having all required materials on hand
- Completing activities and meeting project deadlines
- Working cooperatively with others

## Behavior expectations include:

- Being punctual for all class meeting times
- Maintaining a clean and **SAFE** working environment
- Speaking respectfully to others
- Using all equipment **SAFELY** and for its intended purpose only

## Deadlines and Late Work:

- Meeting project due dates will be critical to your success in this course and as a professional
- Communication is crucial if you are struggling to meet deadlines
- Absolutely no extensions will be given unless communicating with your instructor BEFORE the due dates

## Professionalism Grade:

- Responsible use of equipment/lab time/classroom time
- Maintaining a respectful and positive attitude w/ students and teachers
- Contributing to class discussions, activities, projects beyond a bare minimum level

Regular attendance will be critical for your success in the Pathway to Engineering program. In case of absence, course participants must contact the instructor at [Christine.carlson@k12.sd.us](mailto:Christine.carlson@k12.sd.us) to receive make-up work. Please do not expect to use class time to discuss or complete missed work.

**Note: Participants with unexcused absences may not be given the opportunity to make up group activities and/or group projects.**