

2-5 LEGO Robotics - \$160 (includes \$40 equipment fee - two class times offered)

Instructor: Saffer, D

Students will work together in teams with their own robot kits and can progress at their own pace through a curriculum with building, programming, and competition. Student progress is always tracked so returning students from previous semesters can resume the curriculum where they left off. This class is designed to run over multiple semesters so students can continue with new material. Team progress will be posted online.

This class gives students the opportunity to learn programming skills and apply those skills as they build, program and operate the LEGO WeDo Education kit, the LEGO compatible Edison robot, and the LEGO Mindstorm EV3 robot.



Students will begin with the LEGO Education WeDo core set and curriculum. Using LEGO WeDo robotics kits, students will follow instructions to build a variety of LEGO models and use simple drag and drop program icons to read sensors and activate motors in a logical fashion. This programming platform also allows for math operations, sound and display effects.



Upon completing the LEGO WeDo curriculum of guided and custom projects, students will move into a more complicated programming platform using the LEGO compatible Edison robot where they will use drag & drop program blocks and barcode scanning to program the robot to detect light, sound, and obstacles to make logical decisions driving motors, lights, and audio.



As students become proficient at building and programming they will begin using LEGO Mindstorm EV3 robot kits. Students will build a base robot and learn how to program it using drag and drop graphical programming. After the students move through basic programming, they will have the opportunity to build custom robots and operate them using autonomous programming or with manual remote controls and smart phone apps.

