# Robotics

# Course Syllabus

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Purpose

The field of robotics requires a working knowledge of electronics, mechanics and software. It is usually accompanied by a large working knowledge of many subjects. Focusing on mobile robots and using a hands-on, collaborative approach, students will be introduced to the basic concepts/systems, terminology, and programming involved in robotics. This course will be of specific interest to students who are interested in applications of electronics, computer science, and physics.

Assessment

Lab Grade – Many of the activities for this course are completed in class, especially those requiring the use of computer software. This category includes small or short term assignments, particularly those testing a new skill, and any homework assignments. It also includes grades for attendance, attitude, effort and participation within the classroom.

- Tests & Projects (approx. 50% each) – Tests cover a range of topics within a larger unit, while Projects refers to the final product and presentation of a design project. This category reflects more on the result of student activity rather than the process.
- Final Exam (20%) – A cumulative test over the semester's material.
- Progress Report Grades – The current grade shown in Infinite Campus at the end of assignments due by the end of a marking period will be included in that six-weeks grade. The only grade that carries over is the semester grade.
- Late Work – Late work will be accepted, with a penalty of 20% per school day. No late work will be recorded that is turned in within five days of the end of a grading period. Extensions related to illness and family travel are made on a case-by-case basis.
- Cheating is defined as turning in any work that is not you own, including copying down someone else's homework. Cheating will warrant a zero on the assignment plus possible additional disciplinary action.

Parkway Grading Scale

The grading scale used will be the following:

A (4.0) 90% B (3.0) 80% C (2.0) 70% D (1.0) 60% F (0) below 60%

Semester 1

What is a robot
Common robot components and systems
Fluid power and how it's generated and used
Electrical power and how it generated and used
Boe Bot Robots assembly of circuits and basic programming
VEX and RobotC robots – as time allows