



ROBOTIC PROGRAMMING

*Fairfield Warde High School
Fairfield Ludlowe High School*

Grades 9 - 12

½ Year Course
Completion of Algebra 1 (B or better)

COURSE DESCRIPTION

Robotics, as an organizer of content, offers students a course of study that implicitly demonstrates the application of math, science, and technology as well as introduces students to technological literacy as they develop the following work-related competencies: basic programming, project and time management, resource allocation, information accessing, systems understanding, teamwork, and problem-solving.

COURSE OBJECTIVES

Students will be able to:

- Program mobile robots
- Apply measurement and geometry to calculate robot navigation
- Path planning using both geometry and multiple sensor feedback
- Interpret sensor feedback/ calculating threshold values/ understanding conditional statements

UNITS OF STUDY

- Unit 1: Introduction to Computer Careers
- Unit 2: Robotic Fundamentals
- Unit 3: Movement
- Unit 4: Sensing
- Unit 5: Variables

COURSE POLICIES AND REQUIREMENTS

GRADING

Cumulative / In-Progress Grade:

- 90% will reflect the student's mastery of course content and skills on summative assessments
- 10% will reflect the student's progress on formative assessments, homework, and behavior

End-of-the-Year Grade:

- 90% will reflect the student's cumulative course grade through summative and formative assessments as described above
- 10% of the end-of-the-course grade will reflect the student's performance on the course final assessment

MATERIALS:

Access to a desktop computer,
RobotC Software
Lego Robots Kits (currently EV3 and or Spike)

EXPECTATIONS OF STUDENTS:

The Fairfield Public Schools provide a safe learning environment. Our high school community, in collaboration with parents and other townspeople, fosters a society that recognizes and promotes the dignity and worth of the individual. We believe that meeting the diverse needs of all students will encourage lifelong learning and responsible citizenship.

EXTRA HELP:

Appointments for extra help or individual conferences can be prearranged during a mutual common free period or after school.