

# Engineering Robotics Technology 1

**Teacher:** Mr. Jourden

**Classroom:** B-32/B-34

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## **Course Description: Introduction to Robotics**

During this course students will explore the field of robotic design using a variety of hands on activities. Students will be introduced to various types of robot (arms, mechanized, automated, ) that are designed to complete different tasks. The Student will learn basic programming to input into the robot to perform the desired task. Students will work hands-on in teams to design, build, program and document their robots inputs/outputs. Mechanical concepts such as gearing/torque/speed/power are introduced. Other topics may include motor control, sensors, timing, decision-making, timing sequences, drive trains, actuator and manipulator design.

**Graduation Credits:** Computer, 4<sup>th</sup> Year Math, Computer Credit

**Prerequisites:** Basic Math and Computer Skills

**Length of course:** One semester course that is open to 9-12 grades.

**Computer/Software Usage:** Windows, Keyboarding, Mouse, Labview, Dev C++,

**Materials:** Paper, computer and other drafting equipment will be provided. The student will be responsible for the proper care and up keep of this equipment. **Student should bring a pencil to class everyday.**

**Minimum class requirements:** A student will hand in all required assignments and task sheets on their due dates. Students will also participate with a **positive classroom attitude each day.**

**Student Expectations:** A student will work at assigned station without interfering with another Student's learning. Unless you are working in a team project, students will turn in only their work (copy and cheating will not be tolerated). Students are accountable to be at their workstations at all times unless otherwise notified. A student will be held accountable for any equipment that is purposefully damaged. Remember be respectful and responsible to all school equipment.

**Absences and Tardiest:** Are very critical in this class since it is a progression of learning and the work can only be done in the classroom at the individual computer station. See tardy and absences in the school handbook for rules and guidelines. Students will be responsible for any missed assignments. Work assigned while absent should be submitted in a timely fashion. Excessive absences and tardiness will result in a reduction of grade.

## Grading

Group Participation: 10%

Projects- 55%

Book/Written- 25%

Assignment Binder: 10%

### Grading Scale:

A	93% - 100%	D+	67% - 69%
A-	90% - 93%	D	64% - 66%
B+	87% - 89%	D-	60% - 63%
B	84% - 86%	E	59% and Below
B-	80% - 83%		
C+	77% - 79%		
C	74% - 76%		
C-	70% - 73%		

**Passes and Restroom Usage:** Will only be given at appropriate times and will be at the discretion of the teacher. Please only ask when extremely important at a proper time in class. Misuse or abuse of passes will result in the privileges being denied. Passes may not be used on days that substitutes are in the class. The restroom next to the classroom will remain locked at all times.

**Class Dismissal:** Every minute is important. You will be in charge of keeping your station neat and orderly. The teacher will announce when clean up time will begin. The student should not start cleaning up before this time. Before leaving you must be sitting at your station quietly. Do not leave until the teacher allows you to leave. Any returned assignments, assignment sheets, or folders left on the desks will be recycled.

### Teachers Availability:

Before School	6:50 am – 7:25 am (Earlier by appointment)	
1 <sup>st</sup> Hour	Engineering Tech 1	B-32/B-34
2 <sup>nd</sup> Hour	Engineering Tech 1	B-32/B-34
3 <sup>rd</sup> Hour	Engineering Tech 2	B-32/B-34
4 <sup>th</sup> Hour	Engineering Apps/Block	B-32/B-34
C-Lunch		
5 <sup>th</sup> Hour	Engineering Apps/Block/Architecture	B-32/B-34
6 <sup>th</sup> Hour	Prep	B-32/B-34
After School	2:27 pm – 3:30 pm (Later if by appointment; except Wed)	

### School Respect Policy

The atmosphere on your campus contributes to the level and quality of learning that occurs. All appropriately expressed views and opinions will be treated with respect to everyone. It is the responsibility of the teacher AND the student to create an atmosphere free of harassment, insulting remarks, and ridicule.