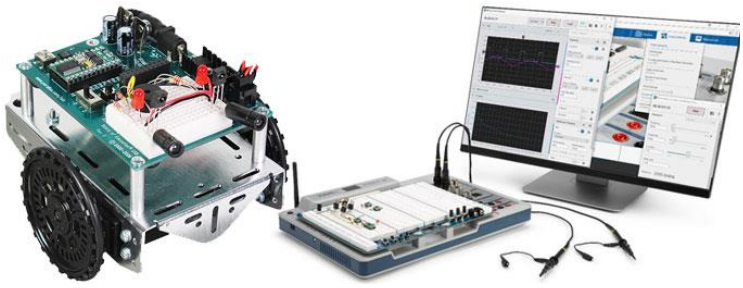
Essentials Of Robotics and Programming Certificate of Achievement

The Certificate of Achievement in Essentials of Robotics and Programming provides students with a high-quality education that prepares them for professional career in programming and robotics. The curriculum prepares students for engineering, mechatronics, and software development as they design, construct, and program an autonomous robot. To complete the Certificate of Achievement in Essentials of Robotics and Programming, students must complete all of the program course requirements.

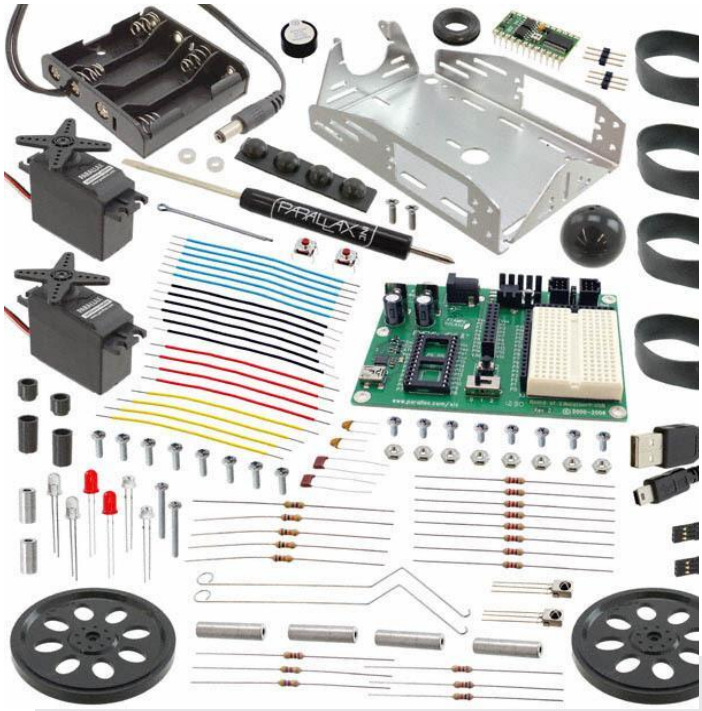


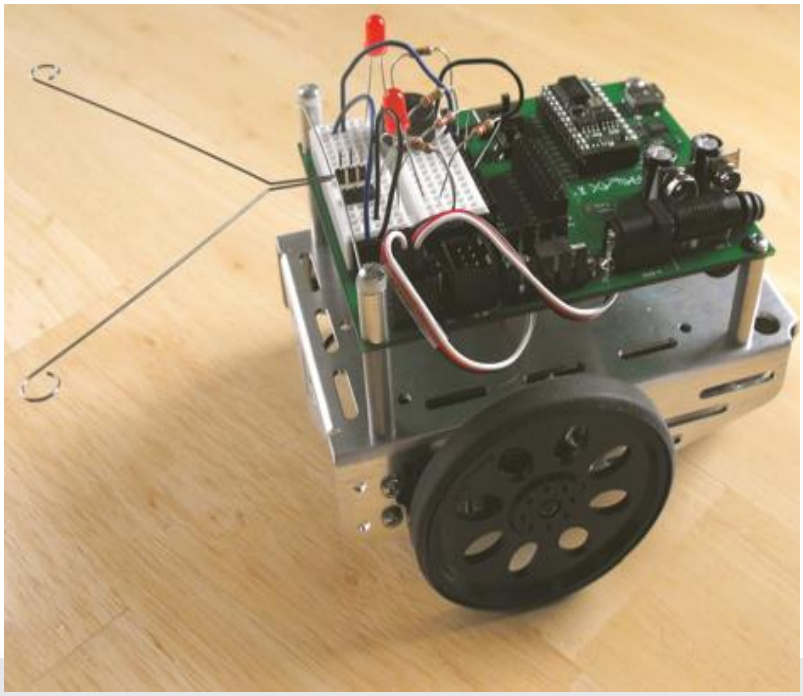
Certificate of Achievement in Essentials of Robotics and programming Requirements

Courses	Course No.	Course Title	Units	Term Offer
Core Requirements	MIT 220	INTRODUCTION TO ROBOTICS	***3***	Fall2023
	EET 123	INTRODUCTION TO ARDUINO	***3***	Spring 2024
	ENG GEN 101	INTRODUCTION TO SCIENCE, ENGINEERING AND TECHNOLOGY	***2***	Fall- Spring
	CS 119	INTRODUCTION TO PYTHON PROGRAMMING	***3***	Fall-Spring
Total Required Core Units			***11***	

Please contact the lead instructor for any questions: *Parvaneh Ghaforyfard* at ghaforp@laccd.edu

MIT 220- Intro To Robotics (Laboratory)
Saturday 9:00AM - 1:00 PM in TLC 403 at West LA College
Fall 2023 : Oct 23, 2023-Dec 17, 2023 sections(25169)-(25170)





MIT 220: INTRODUCTION TO ROBOTICS

About MIT220:

Course objectives:

- Define the components of a robotic kit.
- Operate a robot and compose a program.
- Assemble electronic parts.
- Construct robots from basic electronic elements.
- Evaluate and measure the path moved or the distance traveled.
- Categorize different types of robots
- Differentiate between sensors and devices that evaluate and measure the path moved or the distance traveled.
- Identify and describe components and set up a robot.
- Operate a robot and compose a program.
- Differentiate parts and construct a robot.
- Assemble and test robots from basic electronic elements.
- Compare and evaluate the measured path or the distance traveled.
- Identify and criticize different types of robots and present it in power point.
- Evaluate and compare between sensors and devices for the distance traveled.
- Differentiate between sensors and devices that evaluate and measure the path moved or the distance traveled.
- Implement knowledge to create a program to run a fully functional robot. Demonstrate the robot's functionality.

Student learning outcomes:

Upon completion of this course, the student will be able apply technical knowledge and perform specific technical skills, including:

- Student will be able to understanding the BS-2 software and simple programming.
- Student will be able to describe the functions of sensors.
- Student will be able to describe the functions of servos.
- Student will be able to assembly of basic robot (Boe-Bot), adjusting servo motors, measure and track time.
- Student will be able to program the Boe-Bot to navigate, maneuver and ramp

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Prerequisites:

None