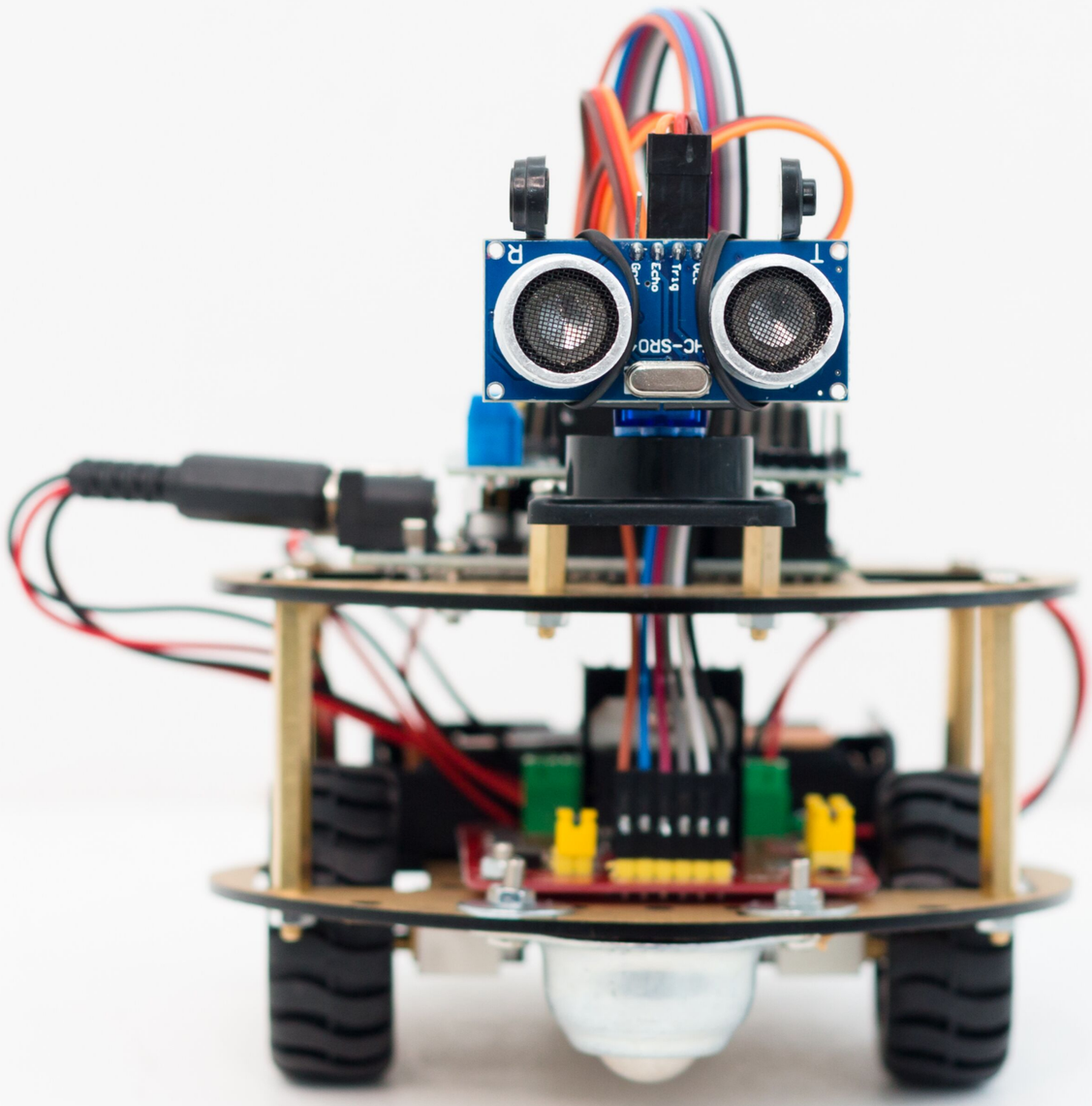
Academy FOR CS EDUCATION

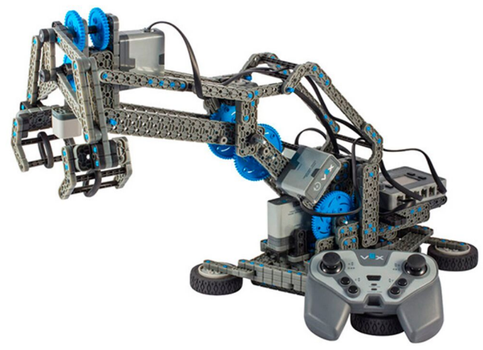
FIU



PROJECT-BASED ACTIVITIES TO EMBED COMPUTATIONAL AND DESIGN THINKING INTO K-12 CURRICULUM

MATH BOTICS

BRING YOUR OWN LAPTOP



PART 1 - INTRODUCTION TO ROBOTICS

Instructor:
Gregory Reis, PhD

Fri, Oct 25 • 8:30AM-3:30PM • FIU PG6 144

Fri, Nov 04 • 8:30AM-3:30PM • FIU PG6 144

INTRODUCTION TO ROBOTICS

PROGRAM OVERVIEW

Arduino, VEX, Sphero, Raspberry Pi and other robotics microcontrollers made it easier and faster to learn how to control a robotic arm, design a robotic car with a remote controller, autonomous or controlled by your smartphone, develop a gardening system where your plants are watered and fertilized according to the temperature, light intensity or timely scheduled, control your curtains automatically, develop games, turning LEDs on and off and so on.

The use of these robotics platforms in school can improve problem-solving skills, draw students to appreciate the power of technology, provide framework for collaboration and teamwork, and can be a lot of fun for the students.

Program Commitments:

The Academy Robotics Series has both in-person and online supports designed to help teachers integrate robotics projects into their classrooms covering the following topics:

- Introduction to Arduino
- Arduino programming
- Understanding sensors and motors
- Using sensors and actuators with Arduino
- Bluetooth module and MIT App Inventor
- Programming an autonomous robotic car
- Arduino environmental sensors
- Building a sensing device with Arduino