

# Robotics Programming & Business Computer Applications

Instructor:  
Todd Sparrow  
Tuition: \*\*\*  
\$90: per semester class due at registration  
Credit:  
1/2 credit per semester  
Homework:  
2-3 hours per week

**Robotics Programming** – This course explores the world of robotics using Edison, a small self-contained robotic learning platform. This course introduces students to several ways robots sense the environment through light, sound, and vibration using sonar, infrared emitters and detectors and light detection. Students will program their robots using web-based programming languages using both drag-and-drop tools including Scratch to advanced techniques with Python. Students will learn the basic programming structures of statements, variables, loops and more. Textbook: All text for lessons, exercises and projects will be available on the online class portal. In-class assignments and worksheets will be handed out each week.



\*\*\***Robotics Kit Required: \$90 (Students will keep this kit).**

I will order class robotics kits in a group purchase.

**Business Computer Applications** - Semester 2 introduces and explores the foundations of document writing with word processing, data management with spreadsheets and creating presentations with office suite applications used in education and business settings. We will use the online version of Microsoft Office 365.

Textbook: Workplace Software and Skills (Free download openstax.org)

ISBN: 978-1961584310

## Requirements and Expectations:

These courses are for 8th-12th grade. High school credit is only available for 9th-12th. No previous programming experience is necessary. Students must have reliable internet access at home and access to a printer to complete this course. High-speed internet is recommended for installation and usage of all course software. Students should be progressing towards a minimum touch-typing rate of 20 wpm.

## Supplies:

\*\*\*Robotics Kit: \$90 (Students will keep this kit) - Robotics class only

Compatible\*\* Laptop: (non-Chromebook) with WiFi.

## Software:

Microsoft Office 365 Online (a free student account will be provided during the course)

Visual Studio Code (free download)

(\*\* see requirements for full details)



\* Each course will satisfy .5 of the 3 elective credits required for graduation in Tennessee. The combined courses will satisfy the full Tennessee computer science credit required beginning in the 2024/25 school year.

\*\* The full listing of the laptop requirements can be found by visiting: <https://wlink.to/ceectech>