RAM 205 - MICROCONTROLLER SYSTEMS

Course Description

This course is a continuation of RAM 155 - Microcontroller Programming. Students implement additional abilities for their robot created during RAM 155, utilizing custom sensors, actuators, and interfaces. Activities require the application and extension of both hardware and software skills developed in prerequisite Engineering Technology courses. Students determine requirements, build hardware, code software, troubleshoot, evaluate, and iterate as they create solutions. As part of this course, students will earn the PCEP - Certified Entry-Level Python Programmer certificate. Group 2 course.

Credit Hours

3

Contact Hours

4

Lecture Hours

2

Lab Hours

2

Required Prerequisites

EET 103, RAM 155

General Education Outcomes supported by this course

Critical Thinking - Direct

Course Learning Outcomes

Knowledge:

- Interface the physical world to a microcontroller using actuators and sensors.
- Use test and manufacturing equipment.
- Work safely.

Application:

- Interpret problem statements.
- Apply specific methodologies for problem-based learning and project management.

Integration:

- Apply the problem-solving process to address various scenarios.

Human Dimension:

- Recognize their ability to solve common problems using technology.

Caring - Civic Learning:

- Appreciate technology as a craft.

Learning How to Learn:

- Recognize failure as a part of learning process.