

# RAM 255 - MICROCONTROLLER AUTOMATION

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## Course Description

This course is an introduction to the Internet of Things (IoT). Students will prototype sensors, actuators, and interfaces to create automated solutions that communicate via the Internet. Students will capture data, apply analytics, and present business value. Group 2 course.

## Credit Hours

3

## Contact Hours

4

## Lecture Hours

2

## Lab Hours

2

## Required Prerequisites

RAM 155

## General Education Outcomes supported by this course

Critical Thinking - Direct, Quantitative Reasoning

## Course Learning Outcomes

### Knowledge:

- Structure data from sensors to create information about the physical world.
- Communicate between systems using Internet services.
- Analyze data to create value.

### Application:

- Interpret problem statements.
- Use problem solving to address challenges and create solutions.

### Integration:

- Describe opportunities and challenges of IoT.
- Describe aspects of security.
- Interpret insights from data.

### Human Dimension:

- Discuss the impact of Internet connectivity.

### Caring - Civic Learning:

- Describe how digitalization is changing markets.

### Learning How to Learn:

- Experience emerging technology.