



## MASTER COURSE OUTLINE

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Date: January 2017

## COURSE TITLE

Introduction to Mechatronic Applications

## GENERAL COURSE INFORMATION

Dept.: MCT

Course Num: 110

(Formerly: )

CIP Code: 15.0405

Intent Code: 21

Program Code: 640

Credits: 3

Total Contact Hrs Per Qtr.: 44

Lecture Hrs: 22

Lab Hrs: 22

Other Hrs:

Distribution Designation: General Elective (GE)

## COURSE DESCRIPTION (as it will appear in the catalog)

An exploratory, hands-on course in mechatronics (the merger of mechanical engineering, electrical engineering, computer control and information technology), as related to the disciplines of computer science, medical simulation, and unmanned systems. This course addresses the skills required for effective career research and educational planning, as well as academic techniques for becoming a successful student in mechatronics related courses, certificates and majors.

## PREREQUISITES

None

## TEXTBOOK GUIDELINES

Texts and equipment determined by faculty

## COURSE LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.*

- 1) Articulate the role of mechatronics in society, using examples of common mechatronics devices and systems.
- 2) Investigate mechatronics related careers and educational programs.
- 3) Identify mechatronics related employment position descriptions and opportunities.
- 4) Describe primary job-related functions of mechatronics professionals.
- 5) Formulate personal, career and academic program goals (holistic) and objectives (progress benchmarks).
- 6) Describe different strategies and techniques for enhancing the potential for academic success.
- 7) Develop a personal schedule that maximizes chances for success in college courses.
- 8) Outline a specific and efficient education plan for earning a credential/degree that maximizes future employment opportunities in a specific mechatronics related position/field.
- 9) Demonstrate basic hands-on programming and control of a mechatronics device/system.

## INSTITUTIONAL OUTCOMES

## COURSE CONTENT OUTLINE

1. Mechatronics in society

2. Mechatronics related professions
3. Educational planning
4. Understanding the teaching and learning process
5. Making the most of how you are taught
6. Making the learning process work for you
7. Building and understanding basic mechatronics devices/systems

**DEPARTMENTAL GUIDELINES** *(optional)*

The syllabus must contain evaluation/grading guidelines, class environment/expectations/rules, course learning outcomes, and a disability services statement. A schedule must be provided to students that contains content covered (text chapters, topics, etc.) and tentative test dates (to include final date/time).

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**DIVISION CHAIR APPROVAL**

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**DATE**