

# The Department of Engineering

## Mechatronics Minor

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### About:

Mechatronics is a multidisciplinary branch of engineering that focuses on the engineering of both electrical and mechanical systems, and also includes a combination of robotics, electronics, computer, telecommunications, systems, control, and product engineering.

**This minor is open to Engineering students only.**

### Requirements:

The Mechatronics minor requires the successful completion of nine courses (22 credits). Six required courses and one associated laboratory, one Mechanical Engineering elective, and one Electrical and Computer Engineering elective.

### Required Courses:

Course	Title	Credits
ME 2100	Statics	3
ME 2101	Dynamic Systems I	3
	ME 3103 or ECE 2290	3-4
ECE 2030	Electric Circuits Fundamentals	3
ECE 2031	Elect Circuit Fundamentals Lab	1
	Either CSC 1051 or ECE 1260/1261	4
	Either ECE 2430/ECE 2431 or ECE 2042/ECE 2043	4

## Mechanical Engineering Elective:

Electives are subject to change. Electives may be added to this list at the discretion of the College of Engineering.

**Select ones course from the list below:**

Course	Title	Credits
ME 5411	Mechatronics	3
ME 5421	Introduction to Robotics	3
ME 5441	Advanced System Modeling	3
ME 7205	Advanced Dynamics	3
ME 8204	Robotics:Analysis & Control	3
EGR 8301	Control Systems Engineering	3
EGR 8302	Digital Control	3
EGR 8304	Nonlinear Control	3
EGR 8305	System Identification	3
EGR 8308	Feedforward Control	3
EGR 8311	Machine Learning for Engineers	3

[ME 5001](#) with approval from the Minor Director

## Electrical and Computer Engineering Elective:

Electives are subject to change. Electives may be added to this list at the discretion of the College of Engineering.

**Select ones course from the list below:**

Course	Title	Credits
ECE 5390	Control System Design	4
ECE 5400	Applied Machine Learning	3
ECE 5450	Microcontrollers & Applic	3
ECE 5451	Adv Microcontroller App Design	3
ECE 5480	Android Mobile Dev Programming	3
ECE 5800	Electric Machines	3
ECE 7580	Intro to Power Electronics	3
ECE 7830	Intro. to Electric Drives	3
ECE 8425	Microproc & Microcomp	3
EGR 8301	Control Systems Engineering	3
EGR 8302	Digital Control	3
EGR 8304	Nonlinear Control	3
EGR 8305	System Identification	3
EGR 8308	Feedforward Control	3

[ECE 5991](#) with approval of Minor Director