MECHATRONICS (MECH)

MECH-210 Mechatronics I
5 Credits
Lecture: 5 hours per week
Offering: Fall Only, All Years
This course introduces the fundamentals of mechatronics including theory concepts, troubleshooting, testing, and repair procedures. Topics covered include industrial automation and related control systems, electronics, pneumatics, industrial wiring, electrical/electronic systems and components, and AC/DC motors and related systems.
Corequisites: MECH-210L or WWTR-210L, MECH-211

MECH-210L Mechatronics Lab I
4 Credits
Lab: 12 hours per week
Offering: Fall Only, All Years
This course will give students hands-on exposure in a lab setting to the subjects covered in the MECH-210 Mechatronics I theory class. The instruction will use a variety of mock-ups, trainers, and components to reinforce knowledge of systems, testing, troubleshooting, and repair procedures.
Corequisites: MECH-210, MECH-211

MECH-211 Industrial Automation Control Systems
3 Credits
Lecture: 3 hours per week
Offering: Fall Only, All Years
This course introduces the fundamentals of programmable logic controllers, digital electronics, control systems: with theory concepts, operation, basic programming, troubleshooting, testing, and repair procedures.
Corequisites: MECH-210, MECH-210L

MECH-220 Advanced Mechatronics II
4 Credits
Lecture: 4 hours per week
Offering: Spring Only, All Years
This course builds on the concepts covered in MECH-210 and advances the understanding of mechatronics and the related systems. Topics covered include PLC communications, industrial automation and related control systems, pneumatics, industrial wiring, AC and DC motors and related systems, sensors, electronics, material handling, basic robotics, workstations, advanced electrical motor control, and electrical power distribution.

MECH-220L Advanced Mechatronics Lab II
4 Credits
Lab: 12 hours per week
Offering: Spring Only, All Years
This course will give students hands-on exposure in a lab setting to the subjects covered in the MECH-220 Advanced Mechatronics II theory class. The instruction will use a variety of mock-ups, trainers, and components to reinforce knowledge of systems, testing, troubleshooting, and repair procedures.

MECH-221 Advanced Programmable Logic Controllers II
3 Credits
Lecture: 3 hours per week
Offering: Spring Only, All Years
This course is a continuation of MECH-211 for programmable logic controllers and the related systems, including theory concepts, operation, basic programming, troubleshooting, testing, and repair procedures.
Corequisites: MECH-220, MECH-220L