

AUTOMATED SYSTEMS & ROBOTICS (ASRO)

ASRO1210 | Mechanical Transmission of Power Lab | Laboratory (2 Credits)

Assembling, disassembling and observing applications of bearings, gears, cams, motors, clutches, cylinders (hydraulic and pneumatic), fluid systems, mechanical systems and other automation related components. Drawing and fabrication of simple components.

ASRO1220 | Mechanical Transmission of Power Theory | Lecture (4 Credits)

Identification, recognition and calculations associated with various components of machines including bearings, gears, cams, motors, clutches, cylinders (hydraulic and pneumatic), fluid systems, mechanical systems and other automation related components.

ASRO2100 | Industrial Controls & PLCs Lab | Laboratory (2 Credits)

Installation, wiring, programming, operation, testing and troubleshooting programmable logic controllers. Interfacing programmable logic controllers with switches, sensors, motors, pneumatics, and other I/O devices. Set-up, configuration and troubleshooting inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

ASRO2101 | Industrial Controls & PLC's Lab | Laboratory (3 Credits)

Installation, wiring, programming, operation, testing and troubleshooting programmable logic controllers. Interfacing programmable logic controllers with switches, sensors, motors, pneumatics, and other I/O devices. Set-up, configuration and troubleshooting inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

ASRO2110 | Industrial Controls & PLCs Lab | Laboratory (5 Credits)

Installation, wiring, programming, operation, testing and troubleshooting programmable logic controllers. Interfacing programmable logic controllers with switches, sensors, motors, pneumatics, and other I/O devices. Set-up, configuration and troubleshooting inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

ASRO2120 | Industrial Controls & PLCs Theory | Lecture (8 Credits)

Wiring and programming fundamentals associated with programmable logic controllers. Identification, recognition and calculations associated with inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

ASRO2200 | Automation & Robotics Lab | Laboratory (2 Credits)

Set up, configuration, programming and troubleshooting industrial robots to meet industry standards. Configuration and troubleshooting of installed automation and packaging equipment using machine schematics and related documentation.

ASRO2201 | Automation & Robotics Lab | Laboratory (3 Credits)

Set up, configuration, programming and troubleshooting industrial robots to meet industry standards. Configuration and troubleshooting of installed automation and packaging equipment using machine schematics and related documentation.

ASRO2205 | Automation & Robotics Theory | Lecture (8 Credits)

Identification, recognition, programming and calculations associated with automation and packaging components, motion control, industrial robotics and related documentation.

ASRO2230 | Industrial Robotics Lab | Laboratory (2 Credits)

Set up, configuration, programming and troubleshooting industrial robots to meet industry standards. Industry safety standards, programming methods, applications and interfacing of sensors and I/O devices.

ASRO2241 | Industrial Robotics Theory | Lecture (5 Credits)

Identification, recognition and calculations associated with industrial robotics including terminology, safety practices and procedures, application justifications, robot types, operation, program instructions and techniques, I/O device interfacing, end of arm tooling, system integration and troubleshooting.

ASRO2291 | Industrial Internship/Practicum | Internship (6 Credits)

Internship or practicum option on various manufacturing topics: automation, electronics, robotics, mechanical systems, assembly, troubleshooting, research and/or field service.