



Course Syllabus

Industrial Automation and Robotics I: ELT 131

Faculty Name:	
Course Information:	INDUSTRIAL AUTOMATION AND ROBOTICS I: ELT 131
Course Section, Term and Year:	
Course Meeting Times & Location:	

Contact:

Phone Number:	
Office Location:	
Email address:	
Enter days/time you are available to meet with students.	

Netiquette

Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end interpret the words?

Communication:

Faculty Communication with Students:

Discuss how faculty will contact students.

Student Communication with Faculty:

Discuss how students will contact faculty when they have questions or concerns.

Course Description:

ELT 131 Industrial Automation and Robotics I

2-3-3

Students study the theory and operation of devices and systems that are used in industrial controls, including fundamentals and applications of automation and robotics. Students become familiar with and are able to troubleshoot and repair systems that contain devices such as photoelectric sensors, inductive and capacitive proximity sensors, timing circuits, relays, pneumatic and hydraulic solenoids, and basic controls. Students will understand and work with systems incorporating instrumentation, pneumatics, and hydraulics. *Prerequisite: ELT 125 or permission of Instructor.*

Course Learning Outcomes:

The student will be able to:

1. Learn the fundamentals of control systems, including analog and discrete signal types.
2. Learn about the mechanical aspects of control systems, such as switches, solenoids, etc.
3. Learn about and identify applications for discrete and analog input devices.
4. Learn about and identify applications for various output devices.
5. Demonstrate the application of pneumatic and hydraulic system principles.

Program Learning Outcomes: - (Outcomes Relevant to Course are Shaded)

ELECTRICAL TECHNOLOGY A.A.S.

The student will be able to:

1. Demonstrate fundamental knowledge and hands-on competence in the areas of electricity, electronics, digital electronics, industrial electronics, microprocessors, fiber optics, semiconductor fabrication, telecommunications and computer aided design.
2. Conduct experiments and then analyze, interpret and report results.
3. Demonstrate troubleshooting proficiency and the proper use of electrical diagnostic test instruments.
4. Demonstrate an ability to work independently and in teams.

Course Resources:

Textbook:	Enter title, edition, author, ISBN for required text.
Materials:	Enter all additional required materials and tools needed to complete course here.
Access:	List access codes needed for websites or other software. .

Course Policies:

Click here to describe how students will participate in your class. Include policies regarding missed exams, makeup exams, extra credit assignments, late assignments, missed assignments, etc.

Course Delivery:

Course Content:

Lecture Format:

Student Expectations specific to this course:

Course Outline and Schedule

Grading Method:

Click here to enter a clear explanation of how students will be evaluated, including a description of course assessments and a statement of the assessment process and measurements. Include weight/percentages for quizzes, exams, papers, projects, homework, attendance, participation, etc.

Grading Scale:

Letter	Grade Range
A	Enter range for A.
A-	Enter range for A-.
B+	Enter range for B+.
B	Enter range for B.
B-	Enter range for B-.
C+	Enter range for C+.
C	Enter range for C.
D	Enter range for D.
F	Enter range for F.

Earn an FMCC Micro-credential Badge:

Check this link to see if this course meets a requirement for an FM Micro-credential Badge:

<https://www.credly.com/organizations/fulton-montgomery-community-college/badges>