

Industrial Controls

EET - 2170 501

Course Description

Introduction to industrial control systems for manufacturing and automated test applications. The course will focus on LabVIEW control systems and Programmable Logic Controllers (PLCs). Students will configure, program, and troubleshoot industrial control systems. Lecture and lab combination.

Semester: Fall

Course Student Learning Outcomes

- Demonstrate proficiency in key electronics engineering technology areas.
- Demonstrate appropriate technical reporting, writing and communication skills.
- Demonstrate proficiency in mathematics, especially trigonometry, appropriate for electronics engineering technology.
- Demonstrate proficiency in design, analysis, application and troubleshooting of electrical circuits, electronic instrumentation, and related equipment/devices.
- Enroll and participate in a national engineering society.
- Demonstrate mastery of skills and protocols according to recognized standards and certifications.
- Master computer operation and structure.

Engagement Plan

- The best way to reach me is through the Canvas Inbox. I'll respond within 24 hours on weekdays and am happy to help whenever questions come up. If you need help

over the weekend, contact me on my cell.

- I am generally on campus during the workweek but, life happens. To ensure the lab spaces are open and that I am here to help you if you need it, please contact me before coming in.
- This course is designed for you to work through independently, so there won't be frequent announcements or structured discussions.
- If you need clarification or run into challenges, please don't wait—reach out so we can address it together.

Keys for Success (how to succeed in the course)

- Consistent effort throughout the semester will help you avoid falling behind.
- Good time management is essential—steady progress makes the material easier to learn and apply.
- When students wait until the end, it creates a rush of questions and lab requests. Working steadily ensures smoother support and a better overall experience.
- Do not wait until the end of the semester to begin scheduling labs.. There are only so many hours in a week, and if many students postpone, I may not be able to accommodate everyone at once.

Additional Materials

- A USB Flash Drive or comparable storage device for saving your lab work.

Brief Description of Assignments/Exams

- Follow the Canvas modules. As we go through the class things will change and these changes will always be reflected in the Canvas modules and assignments.
- Assignments and labs will be submitted on Canvas. Students generally scan or take pictures of their work on their phones for submission.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Arithmetic and Comparison Operators Lab 01	Assignment	10
	Arithmetic and Comparison Operators Lab 02	Assignment	10
	Automated McDonalds Lab	Assignment	30
	Choosing a Lab Time	Discussion	0
	Introduce Yourself	Discussion	0
	Introduce Yourself	Discussion	0
	Introduce Yourself	Discussion	0
	Introduction to Studio 5000 Lab 01	Assignment	10
	Introduction to Studio 5000 Lab 02	Assignment	10
	Introduction to Studio 5000 Lab 03	Assignment	10
	Lab Panel HW01	Assignment	10
	Lab Panel HW02	Assignment	10
	Switches and Ladders HW01	Assignment	10
	Switches and Ladders HW02	Assignment	10

Due Date	Assignment Name	Assignment Type	Points
	Switches and Ladders HW03	Assignment	10
	Timer and Counters Lab 01	Assignment	10
	Timer and Counters Lab 02	Assignment	10
	Timer and Counters Lab 03	Assignment	10
	Timer and Counters Lab 04	Assignment	10
	Vending Machine Lab	Assignment	30

Grading Scale

SCALE:

A 93 – 100 % C 73 – 76 %

A- 90 – 92 % C- 70 – 72 %

B+ 87 – 89 % D+ 67 – 69 %

B 83 – 86 % D 63 – 66 %

B- 80 – 82 % D- 60 – 62 %

C+ 77 – 79 % E 0 – 59 %

WEIGHTS:

Homework/labs 65% of final grade

Midterm Exam 10% of final grade

Final Exam 25% of final grade

How to Navigate to Canvas

Online Tutoring

Students at SLCC have access to online tutoring through Canvas. From your Canvas course click Online Tutoring in the course navigation and follow the steps to set up an appointment. If this is your first time using the Online Tutoring we recommend you click "Take a Tour" to familiarize yourself with the service.

Note that students only receive 480 minutes of tutoring time each semester. After that we encourage you to use the resources found through this link:

<https://www.slcc.edu/tutoring/index.aspx>

If you have any additional questions reach out to elarningsupport@slcc.edu.

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the [Institutional Syllabus](#) page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or

want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the [Institutional Syllabus](#) page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

[Advising and Counseling Support Services](#)

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the [Institutional Syllabus](#) page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

[Student Academic Calendar](#)

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)