

**EST 212 Industrial Process Control Laboratory**  
**Spring 2009**  
**MWF, 10:00 - 11:50, ASA 204A**

**Instructor:** Martin Hebel  
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Please include EST 212 in the subject line along with other information.  
**Office Hours** T, Th: 11:00 - 12:00, 1:00- 3:00  
**Web Site:** [www.siu.edu/~mhebel](http://www.siu.edu/~mhebel)

**Textbook:** Hebel, M., Devenport, W., (2006) Process Control. Parallax, Inc.

<b>Grade Distribution:</b>		<b>Grading Scale:</b>	
Lab Work	50%	100-90%	A
Formal Documentation	30%	89-80%	B
Project	20%	79-70%	C
		69-60%	D
		59%-Below	F

**Course Description:**

This course demonstrates principles of measurement, transmission, and utilization of data found in control systems. Experiments and projects develop skills in assembling, testing and troubleshooting of transducer, telemetry and power electronic circuits.

**Course Objectives:**

1. The student will be able to construct and test signal conditioning, power electronic and transducer circuits.
2. Students will be able to construct, program, and test sequential and analog control systems.
3. Students will be able to obtain and record measurement from test instruments.
4. Students will be able to evaluate and document the results of tests, experiments, and projects.
5. Students will be able to work as a member of a group to complete tasks prior to established deadlines.
6. Students will be able to test industrial circuits and systems safely.

**Parts and fees:**

The text and kit contain many of the parts used for this course. Additional devices and hardware will be provided and will remain the property of the program.

**Materials:**

Prior year's lab kit with basic components, leads and tools, Graphing or engineering paper.

**Lab Work:**

Lab work consists of the construction, testing and measurement of various circuits and devices. Labs will have data, questions and other documentation to be completed and submitted for review.

**Formal Documentation:**

From time to time you will be required to write formal reports of your lab work. Students are required to submit individual reports unless otherwise specified.

**Project:**

All students will be involved in the completion of a semester project. More information on this will be forthcoming.

**Absentee Policy:**

It is imperative that you are in attendance for each and every lab meeting as possible on time. You are allotted 3 free miss days; each missed lab beyond that day will reduce your final grade by 5%. Multiple late days will count as a missed day. Students who are ahead on work may 'skip' a lab with permission of the instructor. Only emergencies will not be counted against your missed days. Normal illness and other events will count against missed days so use them wisely.

**Emergency Procedures:**

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on the BERT website at [www.bert.siu.edu](http://www.bert.siu.edu), Department of Public Safety's website at [www.dps.siu.edu](http://www.dps.siu.edu) (disaster drop down) and in Emergency Response Guidelines pamphlet. Know how to respond to each type of emergency. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.