

Syllabus EET K264 Automated Controls I

Fall 2009
Three Rivers Community College
Office Hours: Mon & Wed 12:30 – 2:00

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Text: Kilian, Modern Control Technology, Third Edition

This course provides a basic introduction to control systems. A control system is a collection of components working together under the direction of some machine intelligence (Kilian). The course involves the modeling of electro-mechanical systems including switches, relays, gears, pulleys, heat transfer, motors, actuators, mass-spring systems, sensors, and op-amps. Control theory will be studied at an introductory level as a means to solve control problems.

Method of Evaluation

Homework assignments will be given routinely. Occasionally, these will be collected for grading. When an assignment is to be collected, you will be given notice of that intent at the time the assignment is given. Each class will begin with a review of previously assigned homework. Collected assignments cannot be accepted once they have been reviewed in class.

There will be 5 tests during the course. Please plan to attend all tests. The only allowance for make-up tests will be by prior notification of me before the test is scheduled to start.

The final grade will be calculated using the average of the graded homework assignments weighed at 25% and the average of the tests weighted at 75%. Class participation will also be included in final grade calculation.

College Withdrawal Policy

Students may withdraw, in writing or verbally at the Registrar's Office for any reason until the end of the 10th week of classes. From the 11th week through the end of the 13th week, a student may withdraw with the instructor's written approval.

Disabilities Statement

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Disabilities Counseling Services at 383-5240. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the Disabilities Counselor.

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Tentative Course Outline

<u>Week</u>	<u>Chapter</u>	
Week 1	Chapter 1	Introduction to Control Systems
Week 2	Chapter 3	Operational Amplifiers and Signal Conditioning
Week 3	Chapter 3	Operational Amplifiers and Signal Conditioning
Week 4	Chapter 5	Mechanical Systems
Week 5	<i>Test 1 Chapters 1, 2 & 3</i> Chapter 5	Mechanical Systems
Week 6	Chapter 6	Sensors
Week 7	Chapter 11	Feedback Control Principles
Week 8	<i>Test 2 Chapters 5 & 6</i> Chapter 11	Feedback Control Principles
Week 9	Chapter 11	Feedback Control Principles
Week 10	Chapter 7 <i>Test 3 Chapter 11</i>	Direct Current Motors
Week 11	Chapter 8	Stepper Motors
Week 12	Chapter 9	Alternating Current Motors
Week 13	Chapter 10 <i>Test 4 Chapters 7 & 8</i>	Actuators
Week 14		LaPlace Transform and Control Systems
Week 15		LaPlace Transform and Control Systems
Week 16		<i>Final Exam Chapters 9, 11 & LaPlace</i>