<u>Syllabus</u> ME EN 3200 Mechatronics Laboratory - Fall 2001

Lab Tea	ching Assista	nts:				
	Name		<u>Email</u>	Office Hours		
Satya Krosuri		ri	krosuri@eng.utah.edu	Thur. 1:00-2:00 PM		
Roy Merrell			mailroy@excite.com	Mon. 12:00-1:00 PM		
Anand Ramasundar		asundar	anand_ramasundar@hotmail.com	Tues. 2:00-3:00 PM		
	Jason Riggs		jriggs45@hotmail.com	Tues. 2:00-3:00 PM		
Office: Phone: Laborate	ory:	MEB 2178 587-9018 MEB 2415				
Course Objectives:		Develop skills for the analysis, modeling, and design of mechanisms and their related sensory devices, measurement techniques, and control systems.				
Prerequisites:		CP SC 1000, EE EN 1050, ME EN 2000, ME EN 2040, ME EN 2400 (concurrent enrollment permitted) Mechanical Engineering Intermediate Status				
Texts:		Consult the class web page <u>www.mech.utah.edu/~me3200</u> for the lab handouts. Some experiments involve a pre-lab assignment, which is included in the handout.				
Laboratory:		Experiments deal with computer data acquisition, sensory systems, mechanism behavior, and computer control.				

Lab Policies:

- 1. All lab activities must be completed to receive credit for the laboratory portion of your final grade.
- Handouts must be downloaded prior to your lab and pre-labs completed <u>before</u> coming to class. If the pre-labs are not completed before lab, the score for that lab will be penalized by 25%. Refer to the class web page <u>www.mech.utah.edu/~me3200</u> for handouts and further information.
- 3. Each lab handout includes a questionnaire that must be filled out with the correct answers and checked by the TA before leaving the lab. Labs are scored on a pass/fail system. If the questionnaire is acceptable, the score is 100%. It is important to ensure the details are written down and correct, as this will help out in writing the reports.
- 4. You must attend your scheduled lab unless prior arrangements have been made with all involved Teaching Assistants (TA).
- 5. If you miss a lab, you must be make arrangements with the TAs to complete it immediately.
- 6. Students must write concise reports explaining the subject material of the lab, how the material would be applicable to a mobile robot, what limitations and advantages are expected, and also address any questions mentioned specifically in the lab handouts.
- 7. There will be two written reports due this semester. Teams of two students (or three in extreme circumstances) can work together on these reports. Refer to the sample memos for the required format and the tips sheet to help avoid common mistakes. Report assignments will be provided later in this document.
- 8. If you miss any lab experiment without making prior arrangements, your possible score on that lab will decrease by 15% each business day until it is completed (unless a very good excuse is provided). This also goes for the reports.

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Lab Sections:

Section	Time		Teaching Assistant
2	Monday	11:50am – 2:50pm	Satya Krosuri
3	Monday	3:05pm – 6:05pm	Anand Ramasundar
4	Tuesday	6:15pm – 9:15pm	Satya Krosuri
5	Tuesday	11:50am – 2:50pm	Satya Krosuri
6	Tuesday	3:05pm – 6:05pm	Anand Ramasundar
7	Wednesday	11:50am – 2:50pm	Roy Merrell
8	Thursday	11:50am – 2:50pm	Anand Ramasundar
9	Thursday	3:05pm – 6:05pm	Roy Merrell

Lab Schedule:

Lab 1: Intro to CVI	Week of Sept. 10
Lab 2: Computer Data Collection	Week of Sept. 17
Lab 3: Linkage Design	Week of Sept. 24
Lab 4: Intro to Handyboard	Week of Oct. 8
Lab 5: Photo Sensors	Week of Oct. 15
Lab 6: Ultrasonic Sensors	Week of Oct. 22
Lab 7: Operational Amplifiers	Week of Oct. 29
Lab 8: Position and Velocity Sensors	Week of Nov. 5

Lab Reports:

- Report #1 pertains to computer data acquisition as examined in Labs 1 and 2. The report is due by Oct. 3 at 5:00 PM in the mechanical engineering office (2202 MEB) in the TA folders provided. Report #1 should be no longer than three single spaced pages, or six double spaced pages, including figures. Conciseness will be rewarded. Extra information, such as program code and sample calculations, should be included as an attachment and mentioned in the report.
- 2. Report #2 pertains to sensors as examined in Labs 5, 6, 7, and 8. The report is due by Nov. 21 at 5:00 PM in room 2202 MEB in the TA folders provided. Report # 2 should be no longer than four single spaced pages or eight double spaced pages, including figures. Conciseness will be rewarded. Extra information, such as program code and sample calculations, should be included as an attachment and mentioned in the report.
- 3. Refer to policies 6 and 7 above regarding report preparation. Also refer to handouts provided on the class webpage (www.mech.utah.edu/~me3200) under Lab Handouts.

Grading: The Mechatronics laboratory grade consists of the following: Lab scores: 40% Report #1: 30% Report #2: 30%

Disability Services:

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification.

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