SYLLABUS
ME EN 3200 MECHATRONICS LABORATORY – FALL 2002

Lab Teaching Assistants:

Name	Email	Phone	Office
Satya Krosuri	krosuri@eng.utah.edu	587-9018	MEB 2178
Roy Merrell	mailroy@excite.com	587-9018	MEB 2178
Adam Blankespoor	a.blankespoor@utah.edu	585-7960	MEB 1430
Ben Shores	b.shores@utah.edu		

Laboratory: MEB 2415

Texts: Consult the class web page www.mech.utah.edu/~me3200 for the lab handouts. Some experiments require the completion of a pre-lab assignment, which will be included in the handout.

Laboratory: Experiments deal with computer data acquisition, the Handy Board micro controller system and associated sensors, motor characteristics and their associated position and velocity sensors.

Lab Policies:

1. All lab activities must be completed to receive credit for the laboratory portion of your final grade.
2. Handouts must be downloaded prior to your lab and pre-labs completed before coming to lab. 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 www.mech.utah.edu/~me3200 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 make arrangements with the TAs to complete it immediately.
6. 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.
7. 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.
8. There will be three written reports due this semester. Teams of two students (or three only when a lab section has an odd number of students) can work together on these reports. The TA in each section will randomly choose lab teams. Each student in a lab team must take a turn being the lead writer for at least one of the 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.
9. Lab reports will be due at the beginning of each lab section two weeks following the final lab associated with a given report. If you arrive late to lab on a day that a report is due that report will be considered late and will have 15% deducted as per rule 6 above.

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Lab Sections:

Section	Day	Time	Teaching Assistant
2	Monday	11:50am – 2:50pm	Roy Merrell
3	Monday	3:05pm – 6:05pm	Ben Shores
4	Monday	6:00pm – 9:00pm	Satya Krosuri
5	Tuesday	9:10am – 12:05pm	Adam Blankespoor
6	Wednesday	3:05pm – 6:05pm	Ben Shores
7	Thursday	12:25pm – 3:20pm	Adam Blankespoor
8	Friday	11:50am – 2:50pm	Roy Merrell
9	Friday	3:05pm –6:05pm	Satya Krosuri

Lab Schedule:

Lab 1: Introduction to Lab	Week of Aug. 26
Lab 2: Labview Computer Systems	Week of Sep. 9
Lab 3: Computer Data Collection	Week of Sep. 16
Lab 4: Linkages	Week of Sep. 23
Lab 5: Handy Board	Week of Oct. 7
Lab 6: Photo Sensors	Week of Oct. 14
Lab 7: Ultrasonic Sensors	Week of Oct. 21
Lab 8: Op-Amps	Week of Oct. 28
Lab 9: Position/Velocity Sensors	Week of Nov. 4
Lab 10: Servo & Stepper Motors	Week of Nov. 11
Lab 11: Open Lab	Week of Nov. 25

Lab Reports:

1. Report #1 pertains to computer data collection as explored in labs 2 and 3. The report is due by the start of lab 5. Report #1 should be no longer than five single spaced pages, or ten double spaced pages, including figures. Extra information, such as program code and sample calculations, should be included as an attachment and referenced in the report.
2. Report #2 pertains to the handy board and sensors as examined in labs 5, 6, and 7. The report is due by the start of lab 9. Report # 2 should be no longer than six single spaced pages or twelve 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. Report #3 pertains to motor characteristics as examined in labs 8, 9, and 10. The report is due by the start of lab 11. Report # 3 should be no longer than six single spaced pages or twelve 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.
4. 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: 25% Report #1: 25% Report #2: 25% Report #3: 25%

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.