Instructor:  Dr. Noah D. Machtay, Ph.D., 148 Heavy Engineering Building, 2-9014
e-mail: noah.machtay@stonybrook.edu

Office Hours: TBA, HE 148
Lecture: MW 2:20pm-3:40pm, Melville Library E4310
Lab: Th 2:20-5:10pm, Heavy Engineering 139

Attendance policy: Both lectures and lab sessions are required – there will be no make-ups for announced or unannounced in-class assignments. Lab sessions are absolutely mandatory. Students who are late for or miss a lab session will receive a significantly reduced grade at the instructor’s discretion.


Assignments: Homework assignments will be offered for the benefit of the students, and may be collected and graded as necessary. Students must complete all assignments in a timely fashion in order to maximize the benefit of subsequent in class discussions.

Lab work: Students will form into lab groups of 3. At least 2-3 hands-on projects will be assigned. All projects are team-based. Participation in all lab sessions is required. Missing any lab session will result in a significant grade reduction. Each team will be responsible for delivering an oral presentation for each project. It is each student’s responsibility to ensure that the group functions well and achieves the assigned goals. Differential grading may be employed at the instructor’s discretion.

Calculators: Only approved calculators will be permitted in the midterm and final exam. See the discussion below for approved calculators for this course. Use of an unapproved calculator during an exam will result in ejection without a grade.

Exams: One midterm exam and a final exam. Dates TBA. No make-up exams will be given. Exams will be closed book and closed notes unless otherwise stated by the instructor.

Grading: Midterm: 20%, Projects: 40%, Final: 30%, Participation: 10%.

Cell phone policy: Cellular phones or other communication devices are not permitted in lectures or labs, and are especially prohibited from exams. If you are found to be in possession of such a device during an exam, you will be ejected from the exam and will not receive a grade.

Course Description: An introduction to the design, modeling, analysis, and control of mechatronic systems (smart systems comprising mechanical, electrical, and software components). Fundamentals of the basic components needed for the design and control of mechatronic systems, including sensors, actuators, data acquisition systems, microprocessors, programmable logic controllers, and I/O systems, are covered. Hands-on experience in designing and building practical mechatronic systems are provided through integrated lab activities.
**Americans with Disabilities Act**
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services (DSS), ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential. Students requiring emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information, go to the following web site:

Note: DSS contends that it is the student’s individual responsibility to inform their course instructor of the specifics of any exam appointments. They will send a notice informing the instructor that an accommodation has been deemed appropriate, but they will not inform the instructor that a student has elected to utilize that accommodation on any given exam; they insist that doing so is the student’s responsibility. A student who is granted an accommodation by DSS, and who chooses to make an appointment with DSS to utilize that accommodation on an exam **MUST** inform the instructor of this course no later than one week (7 days, 168 hours) before the exam date. If the student fails to appropriately notify the instructor one week in advance of the exam date, then the instructor cannot be responsible for the accommodation.

**Statement on Academic Dishonesty**
Academic dishonesty is an extremely serious offense and will not be tolerated in any form. Academic dishonesty in general is the presentation of intellectual work that is not originally yours. Examples include, but are not limited to, copying or plagiarizing class assignments including homework, reports, designs, and other submitted materials; copying or otherwise communicating answers on exams with other students; bringing unapproved aids, either in physical (written) or electronic form to an exam; obtaining copies of an exam prior to its administration, etc. Academic dishonesty violates both the ethical and moral standards of the Engineering profession and all infractions related to academic dishonesty will be prosecuted to the fullest via the CEAS CASA committee. For you, the honest student, academic dishonesty results in lower class curves, hence a depression in your GPA and class standing, while cheapening the degree you earn. Please note that failing to provide proper citations in a paper or report constitutes plagiarism and will be prosecuted accordingly. Be sure to cite your sources!

**Allowed Calculators**
For both security and uniformity in this class only the following calculators will be allowed to be used on the midterm and final exams. **There will be no exceptions.** This list of calculators is identical to that allowed for the National Council for Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) exam that many of you will take in your senior year, as well as the Professional Engineering (PE) exam that you may take several years from now. The sooner you become comfortable on one of these calculators, the better. If you have any questions on this policy please feel free to contact me. The NCEES policy on calculators can be found here:
http://www.ncees.org/Exams/Exam-day_policies/Calculator_policy.php

- **Casio:** All **fx-115** models. Any Casio calculator must contain **fx-115** in its model name.
- **Hewlett Packard:** The HP **33s** and HP **35s** models, but no others.
- **Texas Instruments:** All **TI-30X** and **TI-36X** models. Any Texas Instruments calculator must contain either **TI-30X** or **TI-36X** in its model name.

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1 Dr. Jon Longtin, Department of Mechanical Engineering, Stony Brook University