

Cornell University, ECE 4760, Overview and Policy

<http://people.ece.cornell.edu/land/courses/ece4760/ee476.policy.html>

Prerequisites: ECE 3140 and ECE 3150 or Permission of Instructor. You need to know C programming, electronic construction and a fair amount of math for this course. When in doubt, talk to the instructor.

Reading: All assignments are on the web. Labs will be based on web pages, GCC documentation, and Atmel MCU documentation. We will expect you to become completely familiar with detailed MCU information from Atmel. By the end of the semester, you will have to understand about half of the 376 page Mega644 data sheet and read a bunch of GCC examples.

This course is a design course. This means that we will expect you to show considerable creativity, flexibility, and motivation. In particular you will need to:

- * Hit the web and even go to the library to find your own answers to questions you have.
- * Read and understand every aspect of manufacturer's data sheets for a variety of devices.
- * Read class-related email **daily**. You are responsible for any course information communicated by email.
- * Use material from many of the courses you have taken at Cornell. Dig out those old textbooks and stack them on the corner of your desk. Topics from ECE 2100, 3010, 3020, 3100, 3140, 4450, 4750, or 4880 may be useful in this course, particularly depending on the final project you choose.
- * Find solutions on your own from incomplete specifications. The lab assignments become

Course Work: There will be lab assignments and a final project. If I think it is needed, there will be weekly quizzes. The course grade will be calculated as follows:

- * 50% laboratory assignments
- Homework will prepare you for the lab assignments, and is due at the start of each lab. You are expected to do the homework assignment before coming to lab. Familiarity includes knowledge of all on-the-fly notifications made by email, Facebook, etc. Within 24 hours, you have to know the content of communications. Lab demos to TAs will be done at the end of each lab exercise, in lab. 50% of your lab grade depends upon being prepared and on the quality, quantity and character of the work done during the lab period. The remaining 50% will be based on your lab writeup. Similar ratios are used to evaluate the final project. You may not share homework with other teams.
- Lab reports are due at the beginning of the next lab period .
- No late assignments will be accepted without prior permission.
(Except for sickness or family emergency)
- A late assignment receives a ZERO grade.
- Laboratory work will be done in groups of two where, of course, collaboration is encouraged between members of the group. You will turn in one report per team. No written collaboration between groups is permitted. You are (of course) encouraged to help anyone in lab.

* 50% for the final project. Final project grades will be assigned by rank-ordering all projects in all sections, thus you will be competing against everyone in the class for this grade. This means that staff will not be able to estimate your grade on this project until all projects are finished and handed in.

* During the semester, if I feel that students are not attending class with sufficient regularity, or are not doing the assigned reading, there may be quizzes with no warning! If there are quizzes, there will be NO makeups. A missed quiz is a zero. Each quiz given will reduce the weight given to lab assignments by about 2%. [Link to Old Quizes](#). The lowest quiz grade (if any) will be dropped.

* If you feel that you have been unfairly graded, you have one week from the time the assignment is handed back to request a regrade. To request a regrade, you must submit the assignment with a written description of your concern attached to the instructor.

Laboratory Policies: You are expected to attend your assigned lab period **every week** and to finish the lab assignment in the allotted time. You must finish the assignment before the end of the allotted 3 hours, or you will lose up to 50% of your lab grade. You can, of course, start early on an assignment. All negotiations concerning lab absences due to plant trips or sickness are to be conducted with your lab instructor. For plant trips you must notify your instructor in advance.

Lab work will be in groups of 2 or occasionally three. All members are expected to become proficient with all aspects of the lab. Where each has prepared design work or code assigned as homework, the group design will involve negotiation. The members of a group may be graded differentially if it becomes obvious that one person is doing the bulk of the work.

Each student in this course is expected to abide by the Cornell University Code of Academic Integrity. Any work submitted by a student in this course for academic credit will be the student's own work. For this course, collaboration is allowed between partners in a group.

Laboratory Reports: Each laboratory assignment requires a written report. You will submit a single report for your group. The report must be handed in at your assigned lab section, one week after the lab is finished. The report should be submitted as a collection of pages stapled or bound together. The report should be a concise documentation of the project assigned. The presentation should be arranged so that any reader with technical competence in the subject can easily understand what was done and how it was done. The following report organization is suggested:

1. Introduction: Give a short explanation of what was done.
2. Design and Testing Methods: Explain the approach you used for both software and hardware aspects of the assignment. Be sure to include the design of tests whose outcome are convincing to the reader (or to the instructor in the lab) that the requirements of the assignment have been met.

3. Documentation: Include here drawings and program listings, together with any explanatory comments needed.
4. Results: How fast was it? How accurate was it? What were the error ranges.
5. Conclusions: Useability, what you might have done differently, etc. Any comments concerning the assignment, including suggestions for improvement, excuses, and complaints.
6. Answers to specific questions given in the lab writeups.

Past TAs have expanded on this outline with examples on the policy page.

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Guidelines for student assessment (from ABET guidelines). Final projects will be evaluated by the guidelines given in ability to design, ability to communicate, problem solving, and professional and ethical responsibility. See web for full description.

Access to computers: You and your partner will have use of a PC, microcontroller evaluation board, and peripheral breadboard in Phillips 238 during your assigned lab period. Students from other lab periods may use setups not needed by students attending their assigned lab. Machines and file systems sometimes die. You should always back up all your work. There is **no excuse for lost work**, even if it is because of a compiler or other system error.

Academic Concerns: If you are experiencing undue personal or academic stress at any time during the semester or need to talk with someone about a personal problem or situation, I encourage you to seek support as soon as possible. I am available to talk with you about stresses related to your work in my class. Additionally, I can assist you in reaching out to any one of a wide range of campus resources, including:

- Your college's Academic Advising or Student Services Office
- Cornell Learning Strategies Center at 255-6310, <http://lsc.sas.cornell.edu>
- Gannett Health Services at 255-5155, www.gannett.cornell.edu
- Let's Talk Drop-In Consultation and Support www.gannett.cornell.edu/Let'sTalk
- Peer Support provided by Empathy Assistance and Referral Service at 255-EARS

Disability-related concerns: Students with either an ongoing or short-term disability are encouraged to contact Student Disability Services (SDS) for a confidential discussion of their need for academic accommodations. SDS is located in 420 CCC building; phone number is 254-4545.