

GEORGIA INSTITUTE OF TECHNOLOGY
School of Electrical and Computer Engineering

ECE 4175

Embedded Microcontroller Design

Fall 2009

Instructors:

John Peatman
Office: Van Leer E286
Phone: 404-894-2950
770-457-6133 (preferred)
Email address: john.peatman@ece.gatech.edu
jpeatman@comcast.net(preferred)
Office hours: MWF 11-12
OR set a time in class
OR call at home

Lab TAs:

Jeremy Adelsgruber, Michael Pribble, Ben Wallingford

Text:

John Peatman, "Coin-cell-powered Embedded Design." See the memo for printing a free copy.

Q&L Devel. Board:

We will use the supplied Qwik&Low Board discussed in the text for the first lab projects. Subsequently, I will ask you to pay \$35 to buy a "Q&L Development Board," the parts needed to populate it, and a 24x2 LCD character display. We will use the latter on the last few lab projects and for the design project.

Supp. Material:

Check the class website, <http://piclab.ece.gatech.edu>, for project assignments, checkout sheets, past exams, and other supporting material. Check the book website, <http://www.qwikandlow.com>, for source files for program code listed in the book and utilities to compile code on your own PC.

Hour Quizzes:

Reserve the following two quiz dates and be sure to be present on these two dates. **If** something drastic comes up, be sure to call me **before** the quiz. We will make plans accordingly.

First quiz Wednesday September 23

Second quiz Wednesday November 4

I hope that we can arrange with the lab TAs to have a review session the Monday night before each quiz.

Design Project:

We will discuss this further as the semester progresses.

Professionalism:

I expect you to come to class and to arrive on time (2%). During the semester I will let you know about four special speakers for whom your attendance is required (0.5% for each of these). Finally, at the end of the semester, I expect you to take the two minutes necessary to complete the on-line course/instructor survey (1%).

Course Grade:

Lab projects	32%
Design project	8%
Two one-hour quizzes	40%
Final exam	15%
Professionalism	5%

Laboratory: Room: Van Leer Room E265
Phone: 404-894-2968

We want you to team up with one other person for your lab work. You will benefit from the sharing of a heavy load, from the sharing of ideas for the projects, and from the major advantage of sharing ideas for debugging your code. I would also encourage you to talk to other people in the class about the projects.

If you initially team up with someone else and then find that you are doing all the work or can't ever get into the lab together (or whatever else you find is unworkable), I expect you to drop the other person and find a more productive person to team up with. Let me know at that time if you need help in finding such a person.

Please sign the list posted in the lab with your name, the name of your teammate, **and a "handle" of not more than five characters.**

The lab will be overcrowded towards the due dates for each project. Try to get started early and to finish early. To share the lab facilities as equitably as possible, we ask you to sign up your team for no more than **two hours** of future time. Thus, as you complete the hours for which you are presently signed up, you may sign up for two more hours. Your time in the lab begins at 5 minutes after the hour (e.g., 12:05) and ends at five minutes after the hour (e.g., 2:05).

We insist that your program code include clear comments. We also insist that these should be entered **as you enter your program**, not sometime later. They should be there as you try to debug your program (or as you seek help with debugging).

Assuming the lab assistant can complete the check sheet for a project satisfactorily, your grade will be A+ (i.e., 100%) if it is completed by the Wednesday before the due date, A (i.e., 95%) if completed by the due date, L (i.e., 85%) if completed by Friday of the week after it is due, and X (i.e., 50-75%) if completed later than this. It is **your** responsibility to see that the lab assistant **posts** your grade as well as filling out the checkout sheet and collecting your folder with your listings and checkout sheet in it.

You can buy a folder for handing in lab projects from the lab TA for a nickel. Pay the lab TA. **No pennies please!**

When turning in a project in a folder, write on the tab:
<your handle>

Lab Ethics:

If either you or your partner are not carrying roughly 50% of the load on the lab projects, I expect you either to change partners or to notify me.

You may consider it legitimate to share any information about the projects with members of other teams which you do by **talking** about problems and how to get around them. Please do not share your source files or listing files.