

THE UNIVERSITY OF BRITISH COLUMBIA  
Department of Electrical and Computer Engineering  
**EECE 259 - Introduction to Microcomputers**  
Course Information, January 2011  
<http://courses.ece.ubc.ca/259>

**Instructor** Dr. Guy Lemieux, Kaiser 4016, 822-0247, [eece259@gmail.com](mailto:eece259@gmail.com)  
Office Hours: Mon-Thurs 3:15-4pm, or just drop in.

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If there are sufficient questions, a TA may hold office hours – please email to ask them to set one up.

<b>Meeting Times</b>	<b>Section 201</b>	14:00	Mon to Fri	MCLD202	117 students
	<b>Section 202</b>	11:00	Mon to Fri	MCLD254	105 students

### Grading Scheme

55% **Final Exam** (you **must pass** final exam to pass the course)  
25% **Four Practical Assignments**, marked on dates: Jan 21, Feb 11, Mar 11, and Apr 1 or 5,6,7 (TBD)  
20% **Four Quizzes** held in class on dates: Jan 21, Feb 11, Mar 11, and Apr 1 or 5,6,7 (TBD)

### Online Resources

Course website <http://courses.ece.ubc.ca/259> is used to disseminate information.  
**WebCT** is used to record your grades. Check your grades regularly.  
**Any incorrectly recorded grade must be reported within 7 days** (see **Important Policies** below).

**Mailing List** [eece259@ece.ubc.ca](mailto:eece259@ece.ubc.ca) (see **Notes on the Mailing List** below)

**Textbook** Instead of a text, I will provide detailed notes throughout the course.

### Homework

Four **Homework Assignments** will be given, consisting of **Study Questions** and a **Practical Assignment**. The Study Questions are unmarked, but solutions will be provided. The Practical Assignment should be done with a partner of your choice. No groups of 3 will be permitted. In exceptional cases, a group of 1 may be approved.

The **Study Questions** can range from trivial to very intellectually challenging. Most of your quizzes and half of your final exam will consist of problems similar to the Study Questions.

The **Practical Assignment** is intended to make the course fun to learn by giving you a chance to *practice the material* using a real microprocessor board. Without this practice, you may find the concepts very abstract and difficult to learn. To do this part of the homework, you will need a modern PC and a special circuit board, the **Altera DE1**. Some of the quizzes and half of the final exam will consist of problems from the Practical Assignment.

### Extra Resources

1. *Computer Organization*, \*AVAILABLE SOON\* 6<sup>TH</sup> EDITION. Hamacher, Vranesic, Zaky. McGraw Hill 2011.

Others:

2. *Fundamentals of Digital Logic with VHDL Design*, 2<sup>ND</sup> EDITION. S. Brown, Z. Vranesic. McGraw Hill 2005.

3. *Introduction to Computing Systems*, 2<sup>ND</sup> EDITION. Yale N. Patt, Sanjay J. Patel. McGraw Hill 2004.

4. *Computer Organization and Design*, 3<sup>RD</sup> EDITION. D. Patterson, J. Hennessy. Morgan Kaufman 2005.

**Notes: Book [1] is most helpful, and [2] is used in EECE 353 (you may have used in EECE 256). [3] is a slightly easier text than [1], but does not directly cover the Nios processor. [4] explains detailed concepts of a MIPS CPU, which is very very close to Nios, and is as useful as an introduction to EECE476.**

### Important Policies

1. Due to limited seats, you **can only** attend the classroom section which you are registered (201=MCLD202).
2. Any error in recording your marks on WebCT must be reported within 7 days of the work being returned in class (not 7 days after being picked up by you!). After this time, no changes will be made.
3. **If required, one 8.5"x11" aid sheet will be provided. No other aids (calculators, books, etc) are permitted.**
4. A missed quiz or practical due to illness requires a **Doctor's note within 7 days** or a grade of 0 will be given.
5. Practical Assignments are done with a partner, meaning you will be marked at the same time. However, grades are assigned individually. A "no show" will be given a grade of 0.
6. Practical Assignments must be graded only on your designated day during the allotted time. **It is your responsibility to be prepared to be marked on time**; TAs will not stay and mark after the session ends.
7. Common homework and a common final exam are given to both sections. However, the quizzes will differ in various ways. One section (202) always has quizzes before the other section, so I may adjust grades of an entire section (up or down!) so they have the same average and standard deviation.

### Practical Assignment Notes

You will choose a partner and work with him/her for all assignments, but you are graded individually. You must choose which day/session you (and your partner) want be graded, and stick to that session.

**Practicals are graded in MCLD348/358. You must make an appointment ahead of time using the web.**

Practical assignments are done using the Altera DE1 board. Purchase a board from ECE Stores for \$100. We only have enough boards for 1 per pair of students. If you and your partner want a second board, please wait 1 week before purchasing so we don't run out of stock (some students end up borrowing or buying a used board from an upper-year student, leaving a few new ones leftover). *Altera has generously priced this board for UBC students at USD\$99, which below the USD\$125 educational price! The department is paying for the shipping and the currency exchange difference.*

You may consider buying the more powerful Altera DE2 board. UBC lends you one of these boards for use in the EECE353 lab, but you can't take the UBC board home. You can do parts of the EECE353 labs on the DE1, but it just has fewer "lights and switches" and is missing the small 2-line LCD module. If you wish to purchase a DE2 for your own use (and to prepare for your 353 labs), you can order one for US\$269 here: <http://www.terasic.com.tw/cgi-bin/page/archive.pl?Language=English&CategoryNo=39&No=30>  
Extra DE2 features: ethernet, USB host/slave, better VGA colour output (10 bits), 2-line LCD, 8 more switches, 8 more LEDs, 4 more 7-segment display digits, composite video input, IrDA.

### Notes on the Mailing List

Please subscribe to the course mailing list by visiting:

<https://lists.ece.ubc.ca/sympa/subscribe/eece259>

**Deadline:** After Friday, January 14, (electronic) approval by a TA or instructor will be required.

All of the TAs, instructors, and students are on this mailing list. The list is **moderated**, meaning that a TA or instructor must **approve the message** before it will be broadcast to all students. You can also use the mailing list to reliably reach all TAs and instructors (eg, if you are sick for a midterm). Of course, this type of semi-private or private question will not be circulated to other students.

Proper uses of the mailing list:

1. Students can ask course-related questions of the TAs and instructor.
2. Students can ask semi-personal questions (eg: I was sick for the midterm).
3. Students, TAs, or Instructors can reply to questions.
4. Instructor or TAs can make announcements to the entire class.

It will be **assumed** that **all students** are subscribed to this list (meaning: after the deadline, you cannot use the excuse that you forgot / didn't subscribe).