

CONCORDIA UNIVERSITY
Department of Electrical and Computer Engineering
COEN 311 Section Q - Fall 2018

Laboratory Guidelines

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Facilities:

The COEN 311 lab is located in room H-813. The lab setups are composed of PCs and the CMM332 boards which feature a MC68332 microcontroller unit.

Grading Scheme:

The lab accounts for 15% of the overall course grade which will be distributed among 5 experiments (10%) and a lab test (5%). The lab grade of each experiment will be based on participation, completion and lab reports. The lab test will be held at the end of term. More details concerning the lab test and its scheduling will be given at a later date.

Lab Exemptions:

NO LAB EXEMPTIONS. "If you are repeating the course for any reason, you are required to redo all the lab experiments, to obtain new data, to write new lab reports (including the prelab), and to take and pass the lab test. You are NOT permitted to resubmit lab results or lab reports from a previous semester."

Lab content and lab materials:

There will be 5 experiments throughout the semester. The lab manual is available from the University Bookstore (Library Building).

Preparation for each experiment:

In order to prepare for each experiment **you must prior to the lab:**

- a. Read the experiment.
- b. Understand the tasks that need to be performed during the experiment.
- c. Read and understand any accompanying background material.
- d. Perform any preliminary work such as determining instruction formats, hand-assembly of code, S-record generation, source code editing, assembly of source code, etc.

Each student is expected to arrive into the lab prepared. Each lab has a Prelab portion which is to be performed before coming to the lab. **A 20% penalty will be applied if the Prelab portion is not properly prepared prior to the lab.**

Details about lab scheduling:

The lab for COEN 311 is a biweekly lab. Check your personal registration schedule for the scheduling details of your lab section. Week 1 is the first full week of classes. Labs commence the week of Sept. 17, 2018 which is a Week 2 session:

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September 2018
Su Mo Tu We Th Fr Sa
          1
 2  3  4  5  6  7  8
 9 10 11 12 13 14 15 => first full week of term defines Week 1
16 17 18 19 20 21 22 => first lab for Week 2 sessions
23 24 25 26 27 28 29 => first lab for Week 1 sessions
30

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HOW TO IDENTIFY WEEK (1) OR WEEK (2) LABS:

The new SIS system does not indicate WEEK (1) OR WEEK (2) lab sessions. Rather, it lists the dates that each lab is to be performed. To avoid any possible confusion, we will be using the following WEEK (1) and WEEK (2) schedule:

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Lab QI = Week 1 (first lab week of Sept. 24, 2018)
Lab QJ = Week 2 (first lab week of Sept. 17, 2018)
Lab QK = Week 1 (first lab week of Sept. 24, 2018)
Lab QL = Week 2 (first lab week of Sept. 17, 2018)
Lab QM = Week 1 (first lab week of Sept. 24, 2018)
Lab QN = Week 2 (first lab week of Sept. 17, 2018)

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Lab reports:

Technical details on how to write the report can be found in the university form and style document available at:

<https://www.concordia.ca/content/dam/encs/ces/docs/2014FormandStyleGuide.pdf>

The report should contain the following sections:

1. Cover page

Include the experiment number/title, course code and lab section, course name, your name and ID, the name of the lab instructor and the due date and the date the lab was performed.

2. Objectives

State in your **own words** the objectives of the experiment.

3. Theory

Present relevant theory for the experiment.

4. Tasks/Results/Discussion

Present the tasks completed in the experiments along with the results of the actions took to complete the task. Complement the task presentation with discussion and observations.

5. Questions

Answer the questions posed in the handouts or by the lab instructor.

6. Conclusions

State what was achieved in the lab and contrast with the experiment objectives. Conclude on the salient portions of the lab. Do not write conclusions of the form:

“Overall, this lab was a success but I had problems with some syntax errors when I tried to assemble the source code, but eventually I got it to assemble and downloaded the program to the board and the experiment was a success.”

A proper conclusion would be of the following manner:

“The as32 command is used to assemble source code written in 68000 assembly language. The output of the as32 assembler is a listing file and a S-Record file. The listing file contains the original source code together with the machine code (listed in hexadecimal together with the memory addresses which hold the machine code). The listing file is an ASCII text file. The S-Record file is also ASCII text but it contains the machine code together with special headers and address information as well as checksums. The S-Record file is downloaded to the board’s memory using the facilities of the CPU32Debugger interface. The information is transferred via the PC’s RS232 serial port to the microcontroller board.”

7. Appendix

Include your assembler listing and source code. **The assembler listing is to be signed by the lab TA.**

Reports are due at the beginning of the next lab session. Late lab reports will receive **20% penalty** per day, the first day being the day of submission past the beginning of the session. Any other requirements regarding report submission will be made available by the lab instructors.

Lab participation:

The lab instructors will be taking note of the participation of each student. Participation in this context implies:

- preparation and performance during the experiment
- completion of the experiment

A portion of the lab grade will be based upon the level of preparation exhibited by the student.

Communication with the Lab coordinator:

Communicate ANY concerns that you have regarding the operation of the laboratory to the lab coordinator as early as possible.

Policy on Academic Integrity:

Each student is required to work **independently**. All submitted work is expected to be **original**. Cooperation is not permitted at any level (specific to the lab reports).

Any incident of plagiarism will be dealt with according to the Academic Calendar. No exceptions. Refer to the calendar section 17.10. for further details.

A quick summary of what constitutes plagiarism and what are the consequences can be found at:

<http://www.concordia.ca/info/currentstudents/academicintegrity>

Expectation of originality forms:

Students should submit a signed copy of the Expectations of Originality Form at the beginning of the semester to the instructor. Then the student should write on the front page of each lab report "**I certify that this submission is my original work and meets the Faculty's Expectations of Originality**", with his or her signature, I.D. #, and the date.

ECE accounts:

Your ECE account is necessary in order to work in the labs. If you did not obtain your ECE account yet, pass by the Service Desk (H-964) and ask for it. Also if you need to contact faculty/staff of the university by e-mail, use **ONLY** your ECE account. If you must use any other email account, you must include your full name and student identification number.