Laboratory Guidelines

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Facilities:

The COEN 212 laboratory is located in room H-807 and is accessible only during the scheduled lab hours. The lab is equipped with mixed-signal prototyping boards and the required digital components and equipment for all experiments.

Grading Scheme:
15% experiments/lab reports
5% lab quiz

Lab Exemptions:

THERE ARE <u>NO</u> 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 thelab test. You are NOT permitted to resubmit lab results or lab reports from a previous semester."

Lab Content:
There are 5 experiments for this course:
1. Introduction to the Proto-Board, Logic Gates and Debugging Techniques
2. Combinational Logic Circuit Design
3. Design of MSI Components
4. Latches
5. Analysis and Design of counters

Lab Quiz:

The lab quiz will be scheduled during the last week of November. More information concerning the lab quiz will be communicated by email at a later date (towards the end of the term).

Details about lab scheduling:

The lab for COEN 212 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. 16, 2019 which is a Week 2 session**:

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    September 2019
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14 => first full week of term defines Week 1
15 16 17 18 19 20 21 => first lab for Week 2 sessions
22 23 24 25 26 27 28 => first lab for Week 1 sessions
29 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 DI : Week 1  (first lab week of Sept. 23, 2019)
Lab DJ : Week 2  (first lab week of Sept. 16, 2019)
Lab DK : Week 2  (first lab week of Sept. 16, 2019)
Lab DL : Week 1  (etc.)
Lab DM : Week 1
Lab DN : Week 2
Lab D0 : Week 1

Lab FI : Week 1  (first lab week of Sept. 23, 2019)
Lab FJ : Week 2  (first lab week of Sept. 16, 2019)
Lab FK : Week 1  (first lab week of Sept. 23, 2019)
Lab FL : Week 2  (etc.)
Lab FM : Week 1
Lab FN : Week 2

Lab GI : Week 1 (first lab week of Sept. 23, 2019)
Lab GJ : Week 2 (first lab week of Sept. 16, 2019)
Lab GK : Week 1 (etc.)
Lab GL : Week 2
Lab GM : Week 1
Lab GN : Week 2
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Lab Manual:

Will be placed on the course Moodle page.

Pre-Lab:

A set of pre-lab questions for each experiment is given in the lab manual. These questions must be carefully prepared prior to the start of the lab and shown to the lab instructor at the beginning of the session.

There will not be a fixed grade associated with the pre-lab, however the pre-lab will affect the experiment grade as it indicates the level of preparation effort. The lab instructors will take note of whether the pre-lab questions were answered properly or not.

It is also expected that each student perform independent self-study throughout the semester; this means reading the relevent material from the course textbook in advance of a particular lab session in the case that the lab content has not yet been covered in the class lectures.

Lateness and Lab Policies:
Students will be permitted to arrive up to 30 minutes late to a lab session. After this time students may not be permitted access to the lab. **No food or beverages are allowed in the lab**.

Lab Report submission:
Lab reports are due at the beginning of the next lab session. Late lab reports will receive a **20% penalty** for each day they are delivered late, the first day being the day of submission past the beginning of the lab session. There will be no exceptions to this rule. Your lab instructor will commincate instructions regarding the submission of the last lab report.

Lab report content:
One of the goals of the lab is to enhance the student's written communication skills, which are reflected in the experiment reports. It is therefore important to put effort in producing good quality lab reports.

The university's Form & Style document is a good guide for the style to be applied to your reports (https://www.concordia.ca/content/dam/encs/ces/docs/2014FormandStyleGuide.pdf).

Some general tips: Keep in mind that a lab report should communicate to the reader the details of the experiment in such a way that the reader understands the target objectives, the designs involved, the implementation strategy, the process followed and the tools/apparatus used. If the experiment failed, the report should document exactly that and provide a reasonable explanation.

The report is expected to be typed and all figures drawn neatly with software (take the initiative to find some; there are many available at no cost on the internet!). No use of pen/pencil. All figures and tables should be captioned properly and referenced in the text. A figure or table that is not mentioned anywhere in the text body of the report should not be there. The general layout (font selection, spacing, figure and table placement etc.) should focus on increasing the readability of the report. Avoid fancy fonts and organize your text, figures and tables logically on the page. The language style should be technical with well-structured sentences organized in paragraphs.

Policy on Academic Misconduct:

Each student is required to work **independently**. Thus, the lab reports are considered to be an "Individual submission" as per the Expectations of Originality Form. All submitted work is expected to be **original**. This means that lab reports, or any portion thereof, are **not** to be shared in any manner (physical or electronic format). Truth tables, K-maps, Boolean equations and circuit schematic diagrams are to be **originally** created. This also extends to the written portion of the lab report including any answers to questions.

Any incident of plagiarism will be dealt with according to the Academic Calendar without any exceptions. Refer to the calendar section 17.10.3. for definitions and sanctions.

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 other computer accounts:

Every student in ECE has an account on the ECE computer systems. If you did not obtain your ECE account yet pass by the Service Desk (H-964) and ask for it. The people working at the Service Desk (H-964) can also assist you if you need help using the computer facilities.

You will be using your ECE account for assignments/labs/projects for various courses. 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.