ELEX 2117 Course Information

Instructor

Ed Casas. You can reach me by e-mail at ecasas@bcit.ca, by phone at +1 604 432 8936 or by posting a question on the course website.

Office Hours

Contact me by phone or e-mail to set up an online meeting if you need individual, real-time help; there will be no in-person office hours.

Course Format

The course will be held entirely online this term.

Course Website

Lecture notes, lab instructions, quizzes, exams and solutions will be available on the course website: https://learn.bcit.ca/d2l/home/711990.

The website also contains the latest schedule of lectures, labs, quizzes, exams and the course withdrawal deadline.

Please post questions about the course, lecture, or lab material on the website under Activities → Discussions. E-mail questions on personal matters, such as your marks or absences, to the instructor.

You can get text or email notifications of updates to Learning Hub courses by selecting Notifications from the drop-down menu next to your name at the top right of any Learning Hub page. I recommend subscribing to News - new item available and optionally to Discussions - new post ....

Evaluation

Component	Weight
Labs (9)	30%
Quizzes (3)	20%
Mid-Term Exams (2)	25%
Final Exam (1)	25%

ELEX 2117 is a two-component course as defined in section 3.4 of BCIT Policy 5103-PR1. This means you *must* pass both the lab and theory (exam) portions of the course to pass the course. If you pass the theory but not the practical (lab) part of the course you will receive a mark of U; this counts as a failure.

Labs

Lab instructions will be posted on the course website beginning the second week of the course.

Your mark for each lab will be based on a lab report and other documentation that you submit for each lab. In most cases you will also need to submit a video showing the operation of your circuit and screen captures of compilation or simulation results.

You will have at least one week to complete each lab. All lab sets will have the same deadline for submitting lab reports. This deadline will be shown in each Assignment folder on the course website.

If you pass the theory but not the practical (lab) part of the course you will receive a mark of U; this counts as a failure.

Quizzes

Quizzes will be held during the scheduled lecture times on the dates shown in the course schedule.

Exams

Thursday from 3:30 to 5:20 is reserved for Level 2 midterm exams. Two two-hour ELEX 2117 midterm exams will be held on the dates shown on the course schedule.

A three-hour final exam will be scheduled during the final exam week.

Quizzes and exams will be made available under the Activities → Quizzes feature of the course website. They will be "open book" – you may use any books or notes you wish but you may not communicate with others during the exam.

Marking

The marking scheme for each lab will be published on the course website under "Course Information."

A coded description of which item were marked incorrect will be shown in the Grades page on the course website. Not all items in each report will be marked.

The final quiz and lab marks will be computed as the mean after omitting the best and worst results.

Students can retrieve details of their marks from the **marks** document found under Content → Course Information. The password required is available in the Password row in the Grades page of the course website.

Attendance and Absences

I recommend, but do not require, attendance at lectures. If you miss a lecture you can review a recording which will be available on the course website after the lecture.

Students who do not attend lectures forfeit the opportunity to influence the course content, rescheduling of labs and exams and changes to the marking scheme. They must check the course web site regularly to stay informed of such changes.

You do not have to attend your (virtual) lab session but you must submit the required documentation for a lab to get credit for completing it.

If you were unable to complete a quiz, lab or exam because of illness please notify the program administrator, Gundi Minato, who will notify all affected instructors.

Lecture Notes and Other Resources

There is no textbook for this course. Instead, lecture notes will be provided for each topic.

These notes may include exercises that will be completed during the lecture. The answers will be made available on the course website, but you should try to work out the exercises on your own.

The course website contains other resources including two textbook chapters, datasheets, software and links to online materials.

Previous versions of this course are archived at `http://www.ece.ubc.ca/~edc`.

Online Lab Sessions

The Assistant Instructor for the course, Andrew Mokrzycki, will be available in a Virtual Classroom at the start of each scheduled lab session. He will be available until the scheduled end of the lab session or until all students have left. So if you need help completing a lab, make sure you join the Virtual Classroom on at the start of the scheduled lab session. You may attend any lab session(s), not just the one for your set.

Lab Reports and Other Files

Report Format

Divide each report into sections using headings. For example, "Compilation Report".

Follow each figure (diagram or photo) or table with a caption with identifying it. For example "Block diagram of 4-digit BCD Counter."

Add a cover page to each report containing: the course number and name (e.g. "ELEX 2117 Digital Techniques 2"), the lab number and title ("Lab 2 - BCD Counter"), your name and BCIT ID, and the date the document was written. You may find it helpful to create a template that you can re-use for future submissions.

File Formats and Folders

Unless otherwise specified, documents should be submitted in PDF format. *If you submit a lab report in the wrong file format or to the wrong folder you will receive a mark of zero for that submission.* Note that the website will not warn you if you submit the wrong file type.

Just as important as the file format is making sure your document is submitted to the correct folder and that it is readable. After uploading your submission, check that you've used the correct submission folder and make sure it's readable by viewing it on the course website.

Creating PDF Files

Word processors (recent versions of Microsoft Word and the free LibreOffice) will export to PDF files.

Please rotate, crop and scale any images appropriately. Most operating systems also allow you to "print" to a PDF file from their print dialogs.

After submitting a document make sure it's readable by viewing it on the course website.

Listings

Code listings should be included as text using single-spacing and a monospaced font. The course website has a document describing how to embed code in your report. Do *not* use screen captures or photos of your code in your report.

Videos

You must submit your videos as `.mp4` files encoded using H.264/MP3 video/audio codecs at a resolution and frame rate not exceeding 720p30. Text or digits in the video must be oriented correctly. The course website has a document describing how to ensure these requirements are met.

You must upload a stand-alone file that can be viewed off-line, *not* a link, not even to files on the course website.

Submission

Files must be submitted to the correct folder in the Activities → Assignments section on the course website.

You may use any file name for your document. Don't add comments when submitting your documents – I won't see them. Note that submitting file(s) requires two steps: Add a File and then Submit. After submitting your file, check that you can download and read it. You should receive an e-mail confirmation; save it.

Checking that your document is submitted to the correct submission folder and that it's readable is just as important as using the correct file format. Double-check that you've used the correct submission folder and then download your submission to make sure it's readable.

Submissions may be collected any time after the submission deadline. You'll receive a mark of zero for that submission if you have not submitted your file(s) to the correct folder when they're collected.

You'll be able to update your submissions until they're collected. So if you're not finished by the deadline I recommend submitting the incomplete version and updating it later if you get a chance.

Important Notes

1. **If you submit a file in the wrong format it will not be read and you will receive a mark of zero for that submission.**
2. **You must submit the document *in PDF format* unless another file format is specified.**

The website will not warn you if you submit the wrong file, submit it to the wrong folder, if the file is in the wrong format or if it's unreadable. These happen every year. However, no allowances will be made for these types of mistakes.

This policy will seem harsh when you get no credit for something on which you've spent much effort. Unfortunately, it's necessary to run the course efficiently and equitably.

Lab Hardware

To complete the labs you will need the ELEX 1117 and 2117 parts kits and the Analog Discovery 2 as described in the information for First Year students.

Software

We will use Quartus Prime Lite Edition for logic synthesis and the associated version of ModelSim-Intel FPGA Edition for simulation. The course website has links to, and information about, this software.

Academic Integrity

Labs and exams in this course must be done *individually*. Students are encouraged to seek help from classmates but copying is not allowed. Instances of plagiarism will be dealt with according to BCIT policy 5104.

Here are some guidelines for this course:

Don't:

- divide up the work or together on solutions
- submit a modified copy of someone else's solution
- ask to look at someone else's solution or show someone else your solution, not even in rough form
- write out a solution for someone else, not even on a white board

Do:

- help someone else arrive at their own solution by asking them leading questions
- explain your interpretation of the question (but not the solution)
- explain material found in the lecture notes or other references
- share books, papers or links to useful reference material – unless finding this material is part of the assignment

Briefly, if a classmate asks for help, help them to find their own solution, do not show them yours. When copying is detected I can't tell who copied from whom and all students involved will be penalized.

Labs, quizzes and exams may be set up in a way that allows plagiarism to be detected. This may not be obvious to you.

Distributing Course Materials

Lecture recordings are for students in the course and may not be redistributed.

Please ask before distributing materials I've posted. I typically give permission under a CC BY-NC-ND Creative Commons license but this is not possible when the materials are owned by others, such as BCIT.

Quiz

Are the following true or false?

- I can submit documents prepared using Microsoft Word.
- I can submit `.docx` files.
- I must pass the lab portion of the course to pass the course.
- If I miss a lecture I must get a note.
- If I missed a lab because I was sick I should e-mail the instructor a medical certificate.
- The instructor prefers that I ask questions by e-mail.