

ELEX 3525 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 to the Discussions section of the course web site (see below).

Office Hours

My office is in SW1-3061, accessed through SW1-3059. Scheduled office hours are:

Day	Time
Tuesday	11:30 AM– 2:30 PM
Thursday	12:30 PM– 2:30 PM

It's a good idea to let me know if you intend to come by since I may be in a lab or another office. Other times are also possible by appointment.

Lab and Lecture Schedule

Lectures are 50 minutes long starting at:

Day	Time
Tuesday	9:30 AM
Wednesday	10:30 AM
Thursday	2:30 PM

Note that the lecture rooms will change half-way through the term.

Labs are 110 minutes long starting on Wednesday or Thursday at 8:30 AM in SW1-3575. Please check with me if you would like to change your assigned lab section.

Any unscheduled changes to the published room numbers, lecture and lab schedules will be posted on the course web site.

Evaluation

Component	Weight
Assignments	20%
Labs	20%
Mid-Term Exam	20%
Final Exam	40%

Assignments

Several assignment will be given out during the term. You will have at least one week to complete each assignment. Assignments submitted after the solutions are made available will receive a mark of zero. Solutions will be handed out for all questions but not all questions will be marked.

Labs

The mark for each lab will be calculated as follows:

Component	Weight
pre-lab assignment	20%
completion of lab objectives	60%
accurate, complete and well-written lab report	20%

The purpose of the pre-lab assignments is to prepare for the lab, so it must be submitted before the start of the lab or you will receive a mark of zero for the pre-lab. The calculation of the lab completion mark will depend on the lab. It may include demonstrating working operation of a program or circuit or submitting screen captures or measurements. Labs must be completed and reports submitted within one week of the end of the lab. Any lab reports not submitted when the reports are marked will be given a mark of zero.

Exams

There will be one two- or three-hour final exam and one 50-minute mid-term exam. Exams will allow any books or notes but no electronic devices other than a calculator.

Absences

If you were unable to complete an assignment, lab or exam due to illness, please submit a [Student Medical Certificate](#) to [Kelly Voros](#) who will then notify the instructors of the courses affected.

How to Do Well

Experience indicates that those who attend all lectures and labs and submit assignments and lab reports with answers – right or wrong – to every question almost always pass the course. Those who also actively participate by asking questions of themselves, their colleagues or the instructor typically get a final mark of over 70%. And those who review the material critically and try to find the instructor’s mistakes typically get above 90%.

You mark will also depend on your ability to follow instructions and pay attention to details. Students often fail to notice important details and lose marks for things such as giving a very complete and detailed answer to a different question, submitting in a different file format (.doc, .zip) than the one requested, or doing the work and then submitting it late or not at all.

Lecture Notes

There is no textbook required for this course. Instead, lecture notes will be handed out before each lecture. Most lectures will include exercises that you will complete during the lecture. You should bring something to class where you can write your own notes and the answers to the exercises.

The answers that are worked out in class will, eventually, be made available on the course web site. But you should try to work out the exercises on your own.

The text by Beasley, [Electronic Communications: A Systems Approach](#) is used by other courses in the Telecom program and covers some of the material in this course.

Andrew Tanenbaum’s [Computer Networks](#), 5th Edition and William Stallings’ [Data and Computer Communications](#), 9th edition, both published by Prentice-Hall are readable introductions to many aspects of computer networking. Both are available from the BCIT Library.

Course Web Site

Lecture notes, assignments, lab instructions and solutions will be handed out during lectures and will also be made available on the course web site (<https://learn.bcit.ca/d21/home/236564>).

Students can also ask and answer questions using the web site’s “Discussions” feature.

Please do not send e-mail from the course web site, these e-mails have invalid return e-mail addresses and I cannot reply to them.

Previous versions of this course including lectures, notes, assignments, exams and solutions, are archived at <http://www.ece.ubc.ca/~edc>. This is a good source of practice questions for exams.

Document Preparation and Submission

All assignments, pre-labs and lab reports are to be submitted on the course web site. After submitting a file, please verify that you can download and display it. I usually allow a small leeway (minutes, not days) for late submissions.

Document Formats

Much of your professional work will involve working with electronic documents. There are many document formats and the consequences of preparing a document in the wrong format can be serious.

In this course you will be asked to submit assignments and lab reports to the course web site in specific file formats. *If you do not submit an assignment or lab report in the required file format I will not read it and you will receive a mark of zero for that submission.*

For this course, when the file format is not specified, you must submit the document *in PDF format*.

Creating PDF Files

Many word processors (including the free [LibreOffice](#)) will export to PDF files. There are also free utilities such as [CutePDF](#) that allow you to “print” any document to a PDF file.

If you prefer to hand-write your labs and assignments you can scan them and convert them to PDF. You can use the [NAPS2](#) software and the scanner in SW1-3555. If you have a smart phone with a camera

you can also use an application (e.g. [PDF Scanner](#) or [CamScanner](#)) to photograph and convert handwritten assignments to PDF.

Make sure the documents you submit are readable. Grayscale scans are usually easier to read.

Embedding Content

You should learn to include various types of content in your documents. In particular:

- scans or photographs of other printed or handwritten documents;
- graphs and tables created in other 'Office'-type programs and embedded in your document;
- the screen output of arbitrary software using Windows' 'Snip' tool

Significant Figures

Read the Wikipedia article on [Significant Figures](#). Marks will be deducted for using an unwarranted number of significant figures in your assignments and lab reports.

Proctored Lab Hours

The telecom labs (SW1-3555, -3575, -3585) will be open and supervised for a few hours on most evenings. Drop by SW1-3555 and ask the proctor for access to 3575 if you need to finish off a lab. You can also drop in if you want to work with your colleagues in a quiet environment. Hours will be posted on the lab doors.

Equipment

For some of the labs you will need your solderless prototyping board and 3rd-term parts kit.

You will need an 8GB or smaller USB Flash Drive to save oscilloscope display captures and waveforms. It should be formatted with the usual MS-DOS FAT-32 file system (rather than NTFS, for example).

A calculator that can convert between decimal, binary and hexadecimal number bases will be very useful. A calculator that can compute cumulative Gaussian probabilities (such as the Sharp EL-W516XBSL

or Casio FX-115ES/991ES) will be useful for a few problems. In exams you may use any calculator without a wireless interface (i.e. without WiFi, BlueTooth or IR capabilities).

Software

There is a range of free and useful PC software that we will use in the course that you can optionally install on your own computer. This includes: the [Notepad++](#) text editor, the [tcc](#) Tiny C and [Pelles C](#) compilers, the [FreeMat](#) Matlab-compatible numerical analysis software, the [Audacity](#) waveform editor and the [LibreOffice](#) and [CutePDF](#) programs mentioned above. Most of these are also available, or have equivalents, for Mac and Linux systems.

Plagiarism

Plagiarism means taking credit for the work of someone else. Read the [BCIT Student Guide to Plagiarism](#) if you are not clear on the topic. Briefly, do not copy or paraphrase *anything* without attributing the source.

Exams, labs and assignments are to be done individually unless otherwise indicated. Students are encouraged to seek help from classmates but copying is not allowed. Instances of plagiarism will be reported to the Associate Dean and dealt with according to BCIT policy [5104](#) ("Sanctions range up to and including suspension from the institute.").

Assignments, labs and exams may be set up in a way that allows plagiarism to be detected. This may not be obvious to you. If asked, help your classmates find their own solutions, do not share your solution with them.