DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA

CSC258H5S LEC9102
Computer Organization
Course Outline - Winter 2021

Class Location & Time	Thu, 09:00 AM - 11:00 AM
Instructor	Larry Yueli Zhang
Office Location	Virtual
Office Hours	Thursday 1:10-2:30, Friday 3:10-4:30
E-mail Address	ylzhang@cs.toronto.edu
Course Web Site	https://mcs.utm.utoronto.ca/~258/

Course Description

An introduction to computer organization and architecture, using a common CPU architecture (typically MIPS). Core topics: boolean expressions and logic gates, numerical representations, design and analysis of combinational and sequential circuits, the control unit and datapath, the memory hierarchy, instruction set architectures, and assembly programming. Students will design circuits and program using assembly. [24L, 24P]

Prerequisite: CSC148H5 and MAT102H5
Exclusion: CSC258H1 or CSCB58H3 (SCI)
Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from here.

Textbooks and Other Materials

Digital design and computer architecture. Elsevier, 2007/2013. Online version available via UofT library at https://search.library.utoronto.ca/details?7892826

Assessment and Deadlines

Type	Description	Due Date	Weight
Lab	Weekly labs	On-going	24%
Term Test	Midterm test	2021-02-24	24%
Final Exam	Final Exam	TBA	34%
Quiz	Weekly online quizzes	On-going	9%
Assignment	Assembly Programming Project	2021-04-09	9%
		Total	100%

More Details for Assessment and Deadlines

There will be 10 practicals (labs). For each lab, you will be required to submit the circuit file/code as well as a lab report. Each lab will be marked by the quality of the submission. All labs together are worth 24%. The lab submissions are typically due on Tuesday at 10:00 PM unless otherwise specified.

You must attend the PRA section that you are enrolled in. Lab attendance is not graded; however, we expect you to attend the labs to get help from TAs and learn the lab materials thoroughly.

Weekly online quizzes will be worth 9% in total. The quizzes will be made available on Quercus after each week's lectures and can

be answered until 10 PM on the following Wednesday. You may make three attempts for each quiz and your highest score will be recorded.

The midterm test will be held outside of lecture time on February 24th from 7:10 PM to 8:40 PM (90 minutes).

Please contact the instructor by January 31st if you have a time conflict for the test.

There will be an assembly programming project that is due on the last day of the class (April 9).

The term test and the exam will take place in an online format.

You need to score at least 40% on the final exam to pass the course. Students scoring less than 40% on the final exam will receive a maximum final
grade of 47%.

Penalties for Lateness

For lab submissions, we allow one hour of lateness with a 2% penalty, i.e., with the deadline being 10:00 PM, if the submission is at or after 10:00:01 PM and before 11:00:00 PM, a 2% penalty will be automatically applied to the submission. Submissions that are late for more than one hour will NOT be accepted.

For the assembly programming project, we will allow 24 hours of lateness with a penalty of 1% per hour, i.e., the penalty will be up to 24%. Submissions that are more than 24 hours late will NOT be accepted.

For all other submissions (e.g., weekly quizzes), late submissions are NOT accepted.

Procedures and Rules

Missed Term Work

If you are unable to complete an assignment or if you miss a test due to major illness or other circumstances completely outside of your control, get in touch with us immediately if you want to receive special consideration.

In order to receive special consideration, you must fill out a Request for Special Consideration Form, found on the course website. Email the completed form to your instructor right away, together with your supporting documentation. You must also declare your absence on Acorn.

Missed Final Exam

Students who cannot complete their final examination due to illness or other serious causes must file an online petition **within 72 hours of the missed examination**. Late petitions will **NOT** be considered. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. Upon approval of a deferred exam request, a non-refundable fee of $70 is required for each examination approved.

Academic Integrity

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone elses work or ideas without proper attribution. You are expected to read the handout How not to plagiarize (http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

All of the work you submit must be done by you or your group, and your (or your group's) work must not be submitted by someone else. Plagiarism is academic fraud and is taken very seriously. The department uses software that compares programs for evidence of similar code. Please read the Rules and Regulations from the U of T Calendar (especially the Code of Behaviour on Academic Matters): http://www.governingcouncil.utoronto.ca/policies/behaveac.htm

Please do not cheat. It is unpleasant for everyone involved, including us. Here are some general guidelines to help you avoid plagiarism:

- Never look at another student's assignment solution. Never show another student your assignment solution. This applies to

all drafts of a solution and to incomplete and even incorrect solutions.
- Keep discussions with other students focused on concepts and examples. Never discuss assignments before the due date with anyone but your Instructor and your Teaching Assistants.
- During the Midterm/Final Examination, only communicate with the Instructor, and/or Teaching Assistant(s).
- Ensure that you are not using unauthorized aids.

All submitted work is subject to verification with plagiarism detection tools.

Final Exam Information

Duration: 2 hours
Aids Permitted: Open book (Textbook)

Additional Information

Course Website and Discussion Board

The course website contains all course-related material. As an alternative to emailing questions, this course will be utilizing a discussion board (link on the course website) for Q&A. Students, Teaching Assistants and the Instructors have the opportunity to answer questions. If you think that your classmates would benefit from an answer, please make a discussion board post rather than sending an email. If the question is of a personal/private nature, do send an email.

We will also use the discussion board to post announcements and updates, so **the daily reading of the discussion board is required**.

Remark Requests

If you feel there was an error in the marking of a lab report or the assembly programming project, you may request a remark directly on MarkUs.
If you feel there was an error in the marking of a test, you may request that it be remarked via a Remark Request Form, found on the course website.

You must give a specific reason for the request, referring to a possible error or omission by the marker.

Please keep in mind that your grade **may stay the same, may increase, or may even decrease**, after your remark request is assessed.

For prompt turnaround, remark requests **must be received within one week** of when you received the grade for that item.

Last Date to drop course from Academic Record and GPA is March 15, 2021.