CSCB58: Computer Organization (Fall 2020)

1 Course information

Instructor:

Gennady Pekhimenko
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Teaching Assistants:

Anand Jayarajan (anandj@cs.toronto.edu)
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Lecture hours:

Wednesday 11:00 – 13:00
Friday 11:00 – 12:00

Lab hours:

Monday 11:00 – 14:00
https://utoronto.zoom.us/j/94009704386 (Passcode: 708254)

Tuesday 9:00 – 12:00
https://utoronto.zoom.us/j/95205933572 (Passcode: 045630)

Thursday 17:00 – 20:00
https://utoronto.zoom.us/j/94993998484 (Passcode: 713436)

Webpage: https://cscb58f20.ml/
Discussion board: https://piazza.com/class/kemxsy9by7o707
Quercus: https://q.utoronto.ca/courses/172020
Online lectures: https://vectorinstitute.zoom.us/j/93537472871 (Passcode: 597255)

2 Course overview and objectives

The goal of this course is to understand and design the underlying architecture (digital structures) of computer systems. Specifically students will learn about the binary data representation and manipulation, boolean logic, components of computer systems, memory technology, peripherals, structure of a CPU, assembly languages, instruction execution, and addressing techniques. There are a number of laboratory periods in which students conduct experiments to build digital logic circuits on simulators.

Textbook: Digital Design and Computer Architecture, 2nd edition, by David Harris, Sarah Harris
Prerequisites: [CSCA48H3 or PSCB57H3] and [CGPA of at least 3.5, or enrolment in a CSC

Subject POSt, or enrolment in a non-CSC Subject POSt for which this specific course is a program requirement]
Exclusion: CSC258H
Breadth Requirements: Quantitative Reasoning

Students who lack a pre/co-requisite can request an explicit waiver by sending email to the instructor.

3 Course work and grading policy

Grades will be based on lab exercises, classroom quizzes, assignment, and the final exam.

Type	Description	Due Date	Weight
Lab	10 weeks	weekly	50% (5% each)
Quiz	Appx. 10 weeks	weekly	10% (appx. 1% each)
Assignment	Assembly project	TBA	15%
Final exam	Take-home; Must get at least 40%	TBA	25%

Lab: A major focus of this course is the laboratory exercises. There will be 10 practicals (labs). The mark for each lab is given according to attendance and required demonstrations of results. Each lab is worth 5% of the final grade. The labs require the online submission (Quercus) of a prelab report with a deadline before the corresponding lab starts. Each prelab report is worth $\sim 3\%$ of the final grade (included in the 5% grade of each lab).

Quiz: Weekly online quizzes will be worth 10% in total. The quizzes will be made available on Quercus on every Friday at the beginning of the lecture. Students will be given 15 minutes to answer the questions.

Assignment: There will be an assembly programming project that is due on the last day of the class.

Final exam: Final exam will be conducted as a take-home exam and the details will be announced through Quercus. Students who receive less than 40% in the final exam will be deemed as failed in the course.

4 Procedures and rules

4.1 Penalties for lateness

Late work is not accepted unless excused by a documented emergency.

4.2 Missed final exam

Students who cannot write a final examination due to illness or other serious causes must file an online petition **within** 72 **hours of the missed examination**. Original supporting documentation must also be submitted to the Office of the Registrar **within** 72 **hours of the missed examination**. Late petitions will **NOT** be considered. If illness is cited as the reason for a deferred exam request, a U of T Verification of Student Illness or Injury Form must show that you were **examined and diagnosed at the time of illness and on the date of the exam, or by the day after at the latest**. 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.

4.3 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/hownot-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 take-home Final Examination, never discuss the questions or answers with anyone. Your final exam submission must only contain your own work.

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