Simon Fraser University
School of Engineering Science
ENSC 254: Introduction to Computer Organization (4)
Summer 2021
Overview

Instructor:
Dr. Craig Scratchley   Message me via your Canvas inbox
                            Office hour: tentatively Tuesday after class

Teaching Assistants:
Yuhui Gao, Ehsan Mahoor   Office hours: after labs or as otherwise arranged

Class:
Lecture, Tutorial: Tuesday, Thursday   8:30 – 10:20, remote, largely synchronous
Labs: as scheduled on SIMS, remote

The Course:
Fundamentals of microprocessor architecture and operation; this includes instruction formats, assembly language programming (subroutines, parameter passing, automatic variables, interrupts, etc.), and memory and I/O port interfaces.

Course Discussion Board:
Course related questions should be posted to the Course Discussion board. _Messages of a technical nature sent directly to either TAs or instructor likely will not be replied to._ Click on "Piazza" in the Canvas container for the course.

Recommended Course Textbook
  Modern Assembly Language Programming with the ARM Processor
   by Larry D. Pyeatt
   Publisher: Newnes
   Release Date: May 2016
   ISBN: 9780128037164 online access should be available from the SFU library at…
   https://learning.oreilly.com/library/view/modern-assembly-language/9780128037164/

Other Recommended Course Textbooks and References:
  Computer Organzation and Architecture – Designing for Performance. William Stallings. Pearson.

  ARM Assembly Language : Fundamentals and Techniques, Second Edition (First Edition is perhaps even better)
  9781482229851
  By Hohl, William
  Published by CRC Press LLC (online access should be available from the SFU library)

  ARM 64-Bit Assembly language / Larry D. Pyeatt ; with William Ughetta.

  Larry D. Pyeatt author William Holland Thomas 1805-1893, contributor.

  Oxford, England ; Cambridge, Massachusetts : Newnes 2020

  Online access should be available from the SFU library at…
  https://www.sciencedirect.com/science/article/pii/B9780128192214000109

Assignments:
Students will be required to submit a copy of their assignment submissions electronically. **_Submissions may be evaluated to determine if they have been plagiarized._**

Grade Breakdown:
- Quizzes   20 %
- Assignments   40 %
- Lab work (including a practical exam)   40 %
- Optional project (talk to me if you want to do an optional project – it can give you bonus grades)

Technology Requirements for Successful Completion

The technology requirements for successfully completing your course include a computer, internet access, microphone, and a webcam. Specialized software will also be required and downloads will be provided on Canvas. The use of a Windows computer will be assumed, but advice for running software on a Mac or Linux computer will be provided but with no guarantees. Wine and software derived from it should allow Keil uVision to work on a Mac or Linux computer. Some work, including optional work, may require use of VMware software (or possibly VirtualBox but, again, no guarantees).

Class Participation:

Finally, it is important in this class that people participate. In a design team, everyone needs to contribute to the group. That means speaking up when there's a problem or when you see a solution to a problem.

Important Notes: While I promote teamwork and helping each other, copying code from non-public sources and other forms of plagiarism will **_NOT_ be tolerated. Code copied (from presumably public sources) must be properly referenced.

All material delivered or provided in this course, including any visual or audio recording thereof, are subject to copyright laws. **_It is prohibited to record or copy by any means, in any format, openly or surreptitiously, in whole or in part, in the absence of express written permission from Craig Scratchley (or other relevant copyright holder) any of the lectures, materials provided or published in any form, during or after this course._**