Faculty of Engineering | Electrical and Computer Engineering
Engineering Office Wing Room 448 PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada
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COURSE OUTLINE

ECE 255 – Introduction to Computer Architecture

Term –FALL 2020 (202009)

Instructor	**Office Hours**	
Dr. Kin Fun Li	Days:	Wednesdays
Phone: +1-250-721-8683	Time:	11:00-12:00
E-mail: kinli@uvic.ca	Location:	Zoom or by appointment via email

Course Objectives

- To gain an understanding of how a computer system works and its subsystems interact
- To familiarize the control of low-level computer operations using assembly language programming

Learning Outcomes

- Able to select suitable computer hardware and system software for specific engineering applications
- Able to synergize computer system hardware and software
- Able to relate high-level algorithmic concepts and programming languages to machine-level system hardware and software

Syllabus

The architecture of computer systems including concepts such as processor, memory, buses, input/output, instruction sets, interrupt processing, pipelining, performance. Families of processors, CISC, RISC. Memory organization and management including cache, virtual memory, protection. Computer arithmetic. Assembly language programming, assemblers, linkers and loaders. Hardware/Software interaction.

A-Section(s):	**Labs**		Start the week of Sept 28; location: online (TBA)
A01 / CRN 10944	B01	M	13:30-16:20
Days: T,W,F	B02	T	16:30-19:20
Time: 9:30-10:20	B03	W	12:30-15:20
Location: Zoom ECE 255	B04	W	16:30-19:20
	B05	F	12:30-15:20
	B06	M	10:30-13:20
	B07	T	13:30-16:20
	B08	Th	13:00-15:50

Optional Text	**Lab Manual**
Title: Computer Organization & Embedded Systems (6)	Title: ECE 255 Laboratory Manual
Author: Hamacher, Vranesic, Zaky, & Manjikian	Author: KFL et al.
Publisher: McGraw Hill	Publisher: Available on Course Web
Year: 2012	www.ece.uvic.ca/~kinli/ece255/

Online Course Delivery:

As this course will be conducted online during this term, students will need to complete assignments/labs online. The students will require access to a computer which has the following software installed: web browser, text processing.

Assessment:

Assignments:	00%	No due dates; solutions posted one week after assignment
Labs	25%	
Quizzes (5X15%)	75%	Date: Sep 25, Oct 13, Oct 28, Nov 18, Dec 4

Important: All deadlines and schedules for this course will reference Pacific Daylight Time until November 1, 2020, and then Pacific Standard Time.

Note: Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

https://www.uvic.ca/calendar/archives/202009/undergrad/index.php#/policy/S1AAgoGuV?bc=true&bcCurrent=14%20-%20Grading&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies

There will be no supplemental examination for this course.

https://www.uvic.ca/calendar/archives/202009/undergrad/index.php#/policy/SJ2Rxoz_N?bc=true&bcCurrent=13%20-%20Examinations&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies

Note to students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Assistant to set up an appointment.

Course Withdrawal Deadlines:

- September 22, 2020: Withdrawal with 100% reduction of tuition fees
- October 13, 2020: Withdrawal with 50% reduction of tuition fees
- October 31, 2020: Last day for withdrawal (no fees returned)

Accommodation of Religious Observance:

https://www.uvic.ca/calendar/archives/202009/undergrad/index.php#/policy/r1q0gofdN?bc=true&bcCurrent=10%20-%20Accommodation%20of%20Religious%20Observance&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies

Policy on Inclusivity and Diversity:

Engineering: https://www.uvic.ca/engineering/about/equity/index.php
Academic Calendar:
https://www.uvic.ca/calendar/archives/202009/undergrad/index.php#/policy/HkQ0pzdAN?bc=true&bcCurrent=%20General%20University%20Policies&bcGroup=General%20University%20Policies&bcItemType=policies

Standards of Professional Behaviour:

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.
https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Academic Integrity
Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.
https://www.uvic.ca/calendar/archives/202009/undergrad/index.php#/policy/Sk_0xsM_V?bc=true&bcCurrent=08%20-%20Policy%20on%20Academic%20Integrity&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies

Equality:
This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum, and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging an appropriate accommodation. Alternatively, you may want to contact the Centre for Accessible Learning located in the Campus Services Building. https://www.uvic.ca/services/cal/. The University of Victoria is committed to promoting, providing, and protecting a positive, supportive, and safe learning and working environment for all its members.

Course Lecture Notes:
Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

Sexualized Violence Prevention and Response at Uvic:
UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:
>   **Where:** Sexualized violence resource office in EQHR; Sedgewick C119
>   **Phone:** 250.721.8021
>   **Email:** svpcoordinator@uvic.ca
>   **Web:** www.uvic.ca/svp

Office of the Ombudsperson:
The Office of the Ombudsperson is an independent and impartial resource to assist with the fair resolution of student issues. A confidential consultation can help you understand your rights and responsibilities. The Ombudsperson can also clarify information, help navigate procedures, assist with problem-solving, facilitate communication, provide feedback on an appeal, investigate and make recommendations. Phone: 250-721-8357; Email: ombuddy@uvic.ca, Website: https://uvicombudsperson.ca/