



COURSE OUTLINE

1. **Course:** CPSC 441, Computer Networks - Fall 2020

Lecture 01: MWF 10:00 - 10:50 - Online

Instructor	Email	Phone	Office	Hours
Sina Keshvadi	sina.keshvadi1@ucalgary.ca	TBA	ICT 727	Mondays 8 AM - 10 AM (via Zoom meeting)

Online Delivery Details:

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time.

- The lecturers will be recorded.
- Students are expected to attend at least 50% of the tutorials. Several important network tools will be practiced in tutorials.
- For each assignment, there is a mandatory online demo session during the tutorials. Each student will present her/his assignment to the TA.

Course Site:

D2L: CPSC 441 L01-(Fall 2020)-Computer Networks

Note: Students must use their U of C account for all course correspondence.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Computer Science 319 or 331; and Computer Science 355 or Computer Engineering 369.

Antirequisite(s):

Credit for Computer Science 441 and Electrical Engineering 573 will not be allowed.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Assignment 1	10%	Due on 2 Oct 2020
Assignment 2	10%	Due on 23 Oct 2020
Midterm (Online)	10%	6 Nov 2020 (30 minutes)
Assignment 3	10%	Due on 13 Nov 2020
Poster session	5 %	During 23 to 26 Nov 2020
Assignment 4	15%	Due on 4 Dec 2020
Final Exam (Online)	40 %	Registrar will schedule.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	66 %	62%	58%	54 %	50 %

The midterm is designed to take 30 minutes, but students will be given 45 minutes to complete it.

The final exam is designed to take 1 hr and 30 minutes, but students will be given 2 hrs and 15 minutes to complete it.

The midterm and final are timed exams.

This course has a registrar scheduled final exam.

4. **Missed Components Of Term Work:**

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Required Textbook(s):

Jim Kurose and Keith W. Ross, *Computer Networking: A Top-Down Approach, 7th Edition*: Pearson.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. **Examination Policy:**

No aids are allowed on tests or examinations.

Ensure you will have a stable, uninterrupted, and high-quality Internet connection for your exams.

The exam is confidential. It can not be copied, printed, and saved at any time. The exam questions and answers can not be disclosed or disseminated to anyone before, during, or after the exam.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. **Human Studies Statement:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course

coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Center:** For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/ fabrication of experimental values in a report. **These are only examples.**
- e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Computer Science, Nelson Wong by email nelson@cpsc.ucalgary.ca or phone 403-210-8483. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a

difference - please participate in these surveys.

- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Course Outcomes:

- Describe the layered architecture of the Internet protocol stack, and discuss the functionality of each layer.
- Explain what a network protocol is, list several Internet protocols, and explain for what purpose they are used.
- Explain the functionality and operation of specific network protocols such as HTTP, FTP, SMTP, DNS, TCP, UDP, and BGP.
- Understand how application-layer messages are carried in the Internet by describing the encapsulation/decapsulation process, store-and-forward mechanism, routing, and addressing.
- Analyze a simple computer network consisting of multiple routers and links to compute performance metrics such as throughput and end-to-end delay.
- Develop client-server network programs that communicate with each other over the Internet using TCP and/or UDP.
- Compare and contrast TCP and UDP, and explain how reliability and congestion control are implemented in TCP.
- Explain how IP addresses are obtained and assigned to end systems, and discuss the operation of DHCP and NAT and how they relate to IPv4 and IPv6.
- Describe what a MAC protocol is and compare different types of MAC protocols in wired and wireless networks, including ALOHA and CSMA.
- Understand the past, present, and potential future impacts of Internet technology on our networked society.

Electronically Approved - Sep 04 2020 11:02

Department Approval