

# COMP 3203 (Winter 2024): Principles of Computer Networks

## General Course Information

- **Course Registration Number (CRN):** 11269 ([https://central.carleton.ca/prod/bwysched.p\\_display\\_course?wsea\\_code=EXT&term\\_code=202410&disp=20209015&crn=11269](https://central.carleton.ca/prod/bwysched.p_display_course?wsea_code=EXT&term_code=202410&disp=20209015&crn=11269))
- **Classes run:** Jan 8, 2024 to Apr 10, 2024
- **Weekly schedule:** Wednesdays and Fridays, 8:35am to 9:55am
- **Instructor:** Prof. AbdelRahman Abdou (abdou at scs.carleton.ca)
- **Office hours:** by appointment; email me.
- **TAs:** Ali Jahromi (AliSadeghiJahromi at cmail.carleton.ca), Ghazaleh Shirvani (GhazalehShirvani at cmail.carleton.ca), and Abdelrahman Soliman (AbdelrahmanSoliman at cmail.carleton.ca).
- **TAs' office hours:** Ali: Friday, 11am-12pm. Abdelrahman: Monday, 10am-11am. Ghazaleh: Wednesday, 12:30pm-1:30pm.
- **Tutorials:** Mondays, 1:05pm to 2:25pm
- **Precludes additional credit for:** SYSC 4602.
- **Prerequisite(s):** COMP 2401 with a minimum grade of C-, and COMP 2402.
- **Material and resources:** Computer Networking, A Top-Down Approach (<https://www.pearson.com/us/higher-education/program/Kurose-Pearson-e-Text-Computer-Networking-Access-Card-8th-Edition/PGM2877610.html>), 2021. 8th edition. Pearson. (Textbook by James F. Kurose and Keith W. Ross).

## Course Summary

This is an introductory course to the field of Network Computing. Topics include: Protocol Architectures and Internetworking, Types of Networks, Communication Protocols, End-System and Network Traffic Management, Structure of Routing and Congestion Control.

## Grading Scheme

The course's grade will be divided over a series of wireshark labs conducted in tutorials (physical attendance required), 6 assignments, a mid-term test, and a final exam. The grading scheme is as follows:

- **16%:** 11 Wireshark labs (worth 2% each; attendance required; you can miss up to 3 labs throughout the term without penalty).
- **24%:** 6 assignments (worth 4% each).
- **25%:** Mid-term test (date: Feb 16).

- **35%**: Final Exam (date: TBD).

## Course Outline

The course outline is listed below.

Week	Tutorials	Date (2024)	Assignments	Topic
Week 1		Jan 10 Jan 12		Ch.1: Computer Networks and the Internet
Week 2	T1	Jan 17 Jan 19	A1 starts (due: Jan 26)	
Week 3	T2	Jan 24 Jan 26	A2 starts (due: Feb 7)	Ch.2: Application Layer
Week 4	T3	Jan 31 Feb 2		
Week 5	T4	Feb 7 Feb 9	A3 starts (due: Feb 16)	Ch.3: Transport Layer
Week 6	T5	Feb 14 Feb 16		Mid-term Test (in class)
Week 7		Feb 21 Feb 23		Winterbreak (No classes and no TA office hours)
Week 8		Feb 28 Mar 1	A4 starts (due: Mar 13)	Ch.4: The Network Layer - Data Plane
Week 9	T6	Mar 6 Mar 8		Ch.5: The Network Layer - Control Plane
Week 10	T7	Mar 13 Mar 15		Ch.6: The Link Layer and LANs
Week 11	T8	Mar 20 Mar 22	A5 starts (due: Mar 29)	Ch.7: Wireless and Mobile Networks
Week 12	T9	Mar 27 Mar 29	A6 starts (due: Apr 5)	Good Friday (No class)
Week 13	T10	Apr 3 Apr 5		Ch.8: Security in Computer Networks
Week 14	T11	Apr 10 Apr 12		(No class)
Week ∞		TBD		Final Exam (Time: TBD)

If you are unsure of the expectations regarding academic integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted (and, if so, to what degree), then you must ASK your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is ALWAYS considered academic misconduct. You are NEVER permitted to post, share, or upload course materials without explicit permission from your instructor.

Academic integrity offences are reported to the office of the Dean of Science. Information, process and penalties for such offences can be found on the ODS webpage (<https://science.carleton.ca/students/academic-integrity/>).

Late assignments are never accepted for any reason. Assignments submissions are handled electronically (i.e., through Brightspace) and there is no "grace period" with respect to a deadline - an assignment submitted even one minute after the deadline is late and will receive a mark of zero.

## Notes on AI Tools

Many of the assessed activities in this course were designed to be completed by an individual working alone. Unless it is explicitly stated otherwise, the use of any will be considered academic misconduct. This includes, but is not limited to, chatbots (e.g., ChatGPT, Google Bard, Bing Chat), research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E).

References to any material you use but did not originate must use the IEEE/APA/MLA citation style. Failure to reference materials correctly can result in severe penalties, and the use of manufactured (i.e., falsified) or misleading references will be treated as evidence of plagiarism and considered academic misconduct.

Everything you submit for evaluation (e.g., assignments, quizzes, tutorials, and examinations) must be the result of your own work and only your own work. If you use more than five consecutive words from a single source without providing a valid reference, then that is considered plagiarism and an example of academic misconduct.

## School of Computer Science Policies

**Undergraduate Academic Advisor** The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP; or by email at [scs.ug.advisor@cunet.carleton.ca](mailto:scs.ug.advisor@cunet.carleton.ca) (mailto:scs.ug.advisor@cunet.carleton.ca). The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

**Graduate Academic Advisors** The Graduate Advisors for the School of Computer Science are available in Room 5302 HP; or by email at [grad.scs@carleton.ca](mailto:grad.scs@carleton.ca) (mailto:grad.scs@carleton.ca). The graduate advisors can assist with understanding your academic audit and the remaining courses required to meet graduation requirements.

## University Policies

**Academic Accommodations.** Carleton is committed to providing academic accessibility for all individuals. Please review the academic accommodation available to students here (<https://students.carleton.ca/course-outline/>).

### Academic Integrity.

Student Academic Integrity Policy: Every student should be familiar with the Carleton University Student Academic Integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offences include plagiarism and

unauthorized collaboration. Any such reported offences will be reviewed by the office of the Dean of Science. More information on this policy may be found on the ODS Academic Integrity page (<https://carleton.ca/registrar/academic-integrity/>).

Plagiarism: As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science. More information and standard sanction guidelines can be found here (<https://science.carleton.ca/students/academic-integrity/>).

Unauthorized Collaboration: Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis".