

# COMP 3203 (Winter 2021): Principles of Computer Networks

## General Course Information

- **Course Registration Number (CRN):** 11121  
([https://central.carleton.ca/prod/bwysched.p\\_display\\_course?wsea\\_code=EXT&term\\_code=202110&disp=12898768&crn=11121](https://central.carleton.ca/prod/bwysched.p_display_course?wsea_code=EXT&term_code=202110&disp=12898768&crn=11121))
- **Classes run:** Jan 11, 2021 to Apr 14, 2021
- **Weekly schedule:** Mondays and Wednesdays, 11:35pm to 12:55pm
- **Room:** virtual (Zoom link (<https://carleton-ca.zoom.us/j/99828815539>); passcode available through cuLearn).
- **Instructor:** Prof. AbdelRahman Abdou (abdou at scs.carleton.ca)
- **Office hours:** virtual (Zoom link (<https://carleton-ca.zoom.us/j/95911933787>); passcode available through cuLearn). Wednesdays and Thursdays, 01:00pm to 02:00pm.
- **TAs:** Hemant Gupta (HemantGupta at cmail.carleton.ca), Muhammad Oshman (MuhammadShafayatosh at cmail.carleton.ca), and Aniq Binte Alam (AniqBinteAlam at cmail.carleton.ca)
- **TA's office hours:** TBD.
- **No tutorials.**
- **Prerequisite(s):** COMP 2401, and one of COMP 2402, SYSC 2100.
- **Material and resources:** Computer Networking, A Top-Down Approach, 2017. 7th edition. Pearson. (Textbook by James F. Kurose and Keith W. Ross).
- **Class discussion forum:** Piazza for COMP 3203 ( [piazza.com/carleton.ca/winter2021/comp3203](https://piazza.com/carleton.ca/winter2021/comp3203)) (please enroll yourselves).

## 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 assignments, programming projects, and wireshark labs.

- **20%** Eight assignments (labelled **A#** below).
- **40%** Six programming projects (labelled **P#** below).
- **40%** Twelve wireshark labs; best 10 will be selected (labelled **W#** below).

# Page Updates and Action Items

- **Jan 4:** the course's webpage is up.

## Course Outline

Week	Date (2021)	Topic
Week 1	Jan 11 Jan 13	Ch.1: Computer Networks and the Internet
Week 2	Jan 18 Jan 20	
Week 3	Jan 25 Jan 27	Ch.2: Application Layer
Week 4	Feb 1 Feb 3	
Week 5	Feb 8 Feb 10	Ch.3: Transport Layer
Week 6	Feb 15 Feb 17	
Week 7	Feb 22 Feb 24	Ch.3: Transport Layer (cont.)
Week 8	Mar 1 Mar 3	
Week 9	Mar 8 Mar 10	Ch.5: The Network Layer - Control Plane
Week 10	Mar 15 Mar 17	
Week 11	Mar 22 Mar 24	Ch.6: The Link Layer and LANs
Week 12	Mar 29 Mar 31	
Week 13	Apr 5 Apr 7	Ch.8: Security in Computer Networks
Week 14	Apr 12 Apr 14	
Week ∞	Apr 19 Apr 21	<b>(No classes)</b>

## School of Computer Science Policies

**Undergraduate Academic Advisor** The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP; by telephone at 520-2600, ext. 4364; or by email at [undergraduate\\_advisor@scs.carleton.ca](mailto:undergraduate_advisor@scs.carleton.ca). The undergraduate advisor can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

**SCS Computer Laboratory.** SCS students can access one of the designated labs for your course. The lab schedule can be found at: <https://carleton.ca/scs/tech-support/computer-laboratories/> (<https://carleton.ca/scs/tech-support/computer-laboratories/>). All SCS computer lab and technical support information can be found at: <https://carleton.ca/scs/technical-support/> (<https://carleton.ca/scs/technical-support/>). Technical support is available in room HP5161 Monday to Friday from 9:00 until 17:00 or by emailing [support@scs.carleton.ca](mailto:support@scs.carleton.ca).

## Faculty of Science Policies

Academic Integrity violations within the Faculty of Science. Students found in violation of the Student Academic Integrity Policy (below) in Computer Science (COMP) courses are subject to severe penalties, as detailed at the Office of the Dean of Science (ODS) page (<https://science.carleton.ca/academic-integrity>). If you are unsure of the expectations regarding academic integrity (how to use and cite references, how much collaboration with lab- or class-mates is appropriate), ASK your instructor or the head TA for your labs. Sharing assignment or quiz specifications or posting them online (to sites such as Chegg, CourseHero, OneClass) is considered academic misconduct. You are never permitted to post, share, or upload course materials without explicit permission from your instructor.

## University Policies

For information about Carleton's academic year, including registration and withdrawal dates, see Carleton' Calendar (<https://calendar.carleton.ca/academicyear/>).

**Pregnancy Obligation.** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit Equity Services (<https://www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>).

**Religious Obligation.** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit Equity Services (<https://www.carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>).

**Academic Accommodations for Students with Disabilities.** If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) (<https://www.carleton.ca/pmc>) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of

the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made.

**Survivors of Sexual Violence.** As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit this page (<https://carleton.ca/sexual-violence-support>).

**Accommodation for Student Activities.** Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. More information can be found here (<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>).

**Medical Certificate.** Please use the official medical certificate form (<https://carleton.ca/registrar/wp-content/uploads/Medical-Certificate-Form.pdf>) for the deferral of assignments due to medical reasons.

**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 awarded penalties which range from a reprimand to receiving a grade of *F* in the course or even being expelled from the program or University. Some examples of punishable offences include: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found here (<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. First offence, first-year students (< 4.0 cr): Final grade reduction of one full grade (e.g., A- becomes a B-, if that results in an F, so be it). First offence (everyone else): F in the course. Second offence: One-year suspension from program. Third offence: Expulsion from the University. Note: these are minimum penalties. More-severe penalties will be applied in cases of egregious offences (e.g., a first-year student accessing CULearn from their phone during an exam will be given an F in the course; bribing a faculty member for a better grade would be grounds for suspension, etc.)

**Unauthorized Co-operation or 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". Please refer to the course outline statement or the instructor concerning this issue.