

COMP 3203 (Winter 2022): Principles of Computer Networks

General Course Information

- **Course Registration Number (CRN):** 11136 (https://central.carleton.ca/prod/bwysched.p_display_course?wsea_code=EXT&term_code=202210&disp=15964723&crn=11136)
- **Classes run:** Jan 10, 2022 to Apr 12, 2022
- **Weekly schedule:** Tuesdays and Thursdays, 14:35pm to 15:55pm
- **Room:** virtual, through Zoom. Class link: <https://carleton-ca.zoom.us/j/93730183533> (<https://carleton-ca.zoom.us/j/93730183533>) (passcode on Brightspace).
- **Instructor:** Prof. AbdelRahman Abdou (abdou at scs.carleton.ca)
- **Office hours:** virtual (by appointment; email me).
- **TAs:** Ali Jahromi (AliSadeghijahromi at cmail.carleton.ca), Aniq Binte Alam (AniqBinteAlam at cmail.carleton.ca), and Arun Palpandian (ArunPalpandian at cmail.carleton.ca).
- **TA's office hours:** virtual (Ali: Mon 11am-12pm; Arun: Wed 9am-10am; Aniq: Wed 3pm-4pm).
- **No tutorials.**
- **Precludes additional credit for:** SYSC 4602.
- **Prerequisite(s):** COMP 2401 with a minimum grade of C-, and (COMP 2402 or SYSC 2100).
- **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 assignments, wireshark labs, and a final exam. The due dates for the assignments and the wireshark labs are listed in the outline below. All due times are 11:59pm ET on the dates indicated (below). Submissions for assignments and wireshark labs are made on Brightspace.

- **20%:** 6 assignments.

- **A1** : covers Chapter 1 (worth 3.64%).
- **A2** : covers Chapter 2 (worth 3.64%).
- **A3** : covers Chapter 3 (worth 3.64%).
- **A4** : covers Chapter 4-5 (worth 3.64%).
- **A5** : covers Chapter 6 (worth 3.64%).
- **A6** : covers Chapter 7-8 (worth 1.82%).
- **40%**: 11 Wireshark labs (worth 3.64% each).
- **40%**: Final Exam (date: TBD).

e-Proctoring: Please note that tests and examinations in this course will use a remote proctoring service provided by Scheduling and Examination Services. You can find more information at <https://carleton.ca/ses/e-proctoring/> (<https://carleton.ca/ses/e-proctoring/>).

Page Updates and Action Items

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

Course Outline

The course outline is listed below. TAs will alternate on holding office hours each week. The TA holding office hours is indicated between parenthesis for each week. The outline also shows the due dates for the course deliverables (Assignments and Wireshark Labs).

Week (TA)	Date (2022)	Topic
Week 1	Jan 11 Jan 13	Ch.1: Computer Networks and the Internet
Week 2 (Arun)	Jan 18 Jan 20	
Week 3 (Aniqa)	Jan 25 Due: W1 Jan 27	Ch.2: Application Layer
Week 4 (Ali)	Feb 1 Due: A1 W2 Feb 3	
Week 5 (Aniqa)	Feb 8 Due: W3 Feb 10	Ch.3: Transport Layer
Week 6 (Ali)	Feb 15 Due: A2 W4 Feb 17	
Week 7	Feb 22 Feb 24	Winterbreak (No classes)
Week 8 (Arun)	Mar 1 Due: W5 Mar 3	Ch.4: The Network Layer - Data Plane
Week 9 (Aniqa)	Mar 8 Due: A3 W6 Mar 10	Ch.5: The Network Layer - Control Plane
Week 10 (Ali)	Mar 15 Due: W7 Mar 17	Ch.6: The Link Layer and LANs

Week 11 (Arun)	Mar 22 Mar 24	Due: A4 W8	
Week 12 (Aniqa)	Mar 29 Mar 31	Due: W9	Ch.7: Wireless and Mobile Networks
Week 13 (Ali)	Apr 5 Apr 7	Due: A5 W10	Ch.8: Security in Computer Networks
Week 14	Apr 12 Apr 14	Due: A6 W11	Buffer
Week ∞	Apr 19 Apr 21		(No classes)

If you are unsure of the expectations regarding academic integrity (how to use and cite references, how much collaboration with lab- or classmates is appropriate), ASK your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is 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. Penalties for such offences can be found on the ODS webpage: <https://science.carleton.ca/academic-integrity/> (<https://science.carleton.ca/academic-integrity/>).

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. 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.

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 SCS.Tech.Support@cunet.carleton.ca.

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://carleton.ca/womensstudies/resources-and-links/equity-services/>).

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 Religious/Spiritual Observances (<https://carleton.ca/equity/focus/discrimination-harassment/religious-spiritual-observances/>).

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) at 613-520-6608 or 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. For more details, visit the Paul Menton Centre (<https://carleton.ca/pmc/>) website.

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>).

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. Standard penalty guidelines can be found here (<https://science.carleton.ca/academic-integrity/>).

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.

Brightspace – FGPA Access to Brightspace University of Ottawa Joint Program graduate students (only) can request access by filling out the form (<https://gradstudents.carleton.ca/faculty-of-graduate-and-postdoctoral-affairs-access-to-brightspace/>).

