

Evaluation Criteria

- Midterm Exam (20%)
 - The midterm test is during class time
- Final Exam (25%)
 - The final exam covers all material discussed in the course
- Paper Presentation (5%)
 - Students will be given a research paper on Wireless Networking to study and present in class.
 - Further information about the presentation requirements will be provided in class.
- Final Project (50%)
 - Students will be required to conduct a comprehensive research project. Topics will be related to wireless network applications, resource management, and reliability.
 - The project will present a theoretical or technical new idea or approach to address a problem or a challenge in wireless networks.
 - Students may be assigned into groups to submit the project deliverables. In this case, each group member will be assessed individually based on their contribution to the overall project.
 - Proposals are up to two pages: an introduction, a discussion of relevant related work in the literature, a description of the research objective(s), and the proposed methodology.
 - Research projects will be evaluated based on originality, technical soundness, the realization of declared objectives, outcomes or results, and the quality of the presentation. For group projects, individual contributions will be part of the evaluation.
 - Students will present their projects in class at the end of the term.
 - All deliverables must be typed. Handwritten submissions will not be accepted. They must be submitted on the due day no later than 11:59:59 pm through Nexus.

Test / Exam Requirements

- Photo ID is required for the exams.
- The use of computers, calculators, phones, or other electronic devices is not permitted during exams.
- Midterm and final exams are closed book.
- Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 204-786-9771 or accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential.

<https://www.uwinnipeg.ca/accessibility-services>.

- Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found in the 2019-20 Undergraduate Academic Calendar online at <http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf>

Student Services and Information

- Students are responsible for regularly checking their UWinnipeg e-mail addresses to ensure timely receipt of correspondence from the University and/or their course instructors.
- All students, faculty and staff have the right to participate, learn, and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found at <https://www.uwinnipeg.ca/respect/>.
- The University of Winnipeg affirms the importance of student mental health and our commitment to providing accessible, culturally appropriate, and effective services for students. Students who are seeking mental health supports are encouraged to reach out to the Wellness Centre at studentwellness@uwinnipeg.ca or 204.988.7611. For community-based mental health resources and supports, students are encouraged to dial 2-1-1. This program of United Way is available 24/7 in 150 languages.

Final Letter Grade Assignment

Historically, numerical percentages have been converted to letter grades using the following scale. However, instructors can deviate from these values based on pedagogical nuances of a particular class, and final grades are subject to approval by the Department Review Committee.

A+	90+ - 100%	B+	75 - 79%	C	60 - 64%
A	85 - 90%	B	70 - 74%	D	50 - 59%
A-	80 - 84%	C+	65 - 69%	F	below 50%

Prerequisite and Restriction Information

(This information can be found in the UW Undergraduate Academic Calendar)

- Consent of the Department Graduate Studies Committee Chair (or research supervisor)

E-mail Communication Requirements

- E-mails from accounts at uwinnipeg.ca are usually not filtered by the UofW e-mail filter. Thereby, it is recommended that electronic communication used for the course utilize a UofW e-mail account or the Nexus platform to minimize the risk of filtering.
- Use 'GACS-7401' as subject in e-mail communication related to the course.

Regulations, Policies, and Academic Integrity

Academic dishonesty is a very serious offense and will be dealt with per the University's policies.

Avoiding Academic Misconduct: Students are encouraged to familiarize themselves with the Academic Regulations, and Policies found in the University Academic Calendar at:

<https://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>

Particular attention should be given to subsections 8 (Student Discipline), 9 (Senate Appeals) and 10 (Grade Appeals). Please note, in particular, the subsection of Student Discipline pertaining to plagiarism and other forms of cheating.

Detailed information can be found at the following:

- Academic Misconduct Policy and Procedures: <https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-policy.pdf> and <https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-procedures.pdf>
- UW Library video tutorial “Avoiding Plagiarism” <https://www.youtube.com/watch?v=UvFdxRU9a8g>

Uploading essays and other assignments to essay vendor or trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves “aiding and abetting” plagiarism. Students who do this can be charged with Academic Misconduct.

Non-academic misconduct. Students are expected to conduct themselves in a respectful manner on campus and in the learning environment irrespective of platform being used. Behaviour, communication, or acts that are inconsistent with a number of UW policies could be considered “non-academic” misconduct. More detailed information can be found here:

- Respectful Working and Learning Environment Policy <https://www.uwinnipeg.ca/respect/respect-policy.html>,
- Acceptable Use of Information Technology Policy <https://www.uwinnipeg.ca/institutional-analysis/docs/policies/acceptable-use-of-information-technology-policy.pdf>
- Non-Academic Misconduct Policy and Procedures: <https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-policy.pdf> and <https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-procedures.pdf>.

Copyright and Intellectual Property. Course materials are the property of the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides—irrespective of format. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the

instructor/presenter before, for example, photographing, recording, or taking screenshots of slides, presentations, lectures, and notes on the board. Students found to be in violation of an instructor's intellectual property rights could face serious consequences pursuant to the Academic Misconduct or Non-Academic Misconduct Policy; such consequences could possibly involve legal sanction under the Copyright Policy

https://copyright.uwinnipeg.ca/docs/copyright_policy_2017.pdf

Privacy

Students have rights in relation of the collecting of personal data the University of Winnipeg:

<https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html>.

Class Cancellation, Correspondence with Students and Withdrawing from Courses

- When it is necessary to cancel a class due to exceptional circumstances, the course instructor will make every effort to inform students via uwinnipeg e-mail and Nexus.
- Students are reminded that they have a responsibility to regularly check their uwinnipeg e-mail addresses to ensure timely receipt of correspondence from the University and/or the course instructor.
- Please let course instructor know if you plan on withdrawing from the course. Note that withdrawing before the VW date does not necessarily result in a fee refund.
- A permitted or necessary change in mode of delivery may require adjustments to important aspects of course outlines, like class schedule and the number, nature, and weighting of assignments and/or exams.

Text Book / Reading List / Tools

Relevant textbook chapters and sections will be given during lectures. Class notes (including references), supplementary scientific papers, and notices will be posted on the course website. Students are responsible for all material covered in class and posted on the website. Students are also responsible for announcements made in class and via Nexus.

Topics to be covered (Tentative)

- 1- Overview of Networking Paradigms
- 2- Cellular Concept
- 3- Multi-hop Wireless Networks
- 4- Personal Area Networks
- 5- RFID, Vehicular Networks, and Satellite Networks
- 6- Functionalities: Medium Access in Single-Hop Wireless Networks
- 7- Medium Access in Multihop Wireless
- 8- Admission Control
- 9- Bandwidth Adaptation
- 10- Paging and Location Update
- 11- Handoff Management
- 12- Routing in Multihop Wireless

13- Localization and Tracking

14- The Internet of Things (IoT)

Note that all topics listed may not be covered and may be offered in a slightly different time order.