



THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-001, 074L, 075L
Course Name: Applications of Database Systems
Course Webpage: <https://nexus.uwinnipeg.ca/d2l/home/67981>

Instructor Information

Instructor: Amanpreet Kaur
Office: 3C08B
E-mail: am.kaur@uwinnipeg.ca
Office Hours: Thursday 1:00 pm – 2:00 pm

Class meeting time: Tuesdays/Thursdays 11:30 am – 12:45 pm 5L24

Lab time: L-074 Thursdays 4:00 pm – 5:15 pm 3D03
L-075 Fridays 4:00 pm – 5:15 pm 3D03

Important Dates

1. First Class: Tuesday, January 7, 2025
2. First Lab: Thursday/Friday, January 9/10, 2025
3. Reading Week (no classes): February 16-22, 2025
4. Midterm Exam: Tuesday, February 25, 2025
5. Final Withdrawal Date w/o academic penalty*: Friday, March 14, 2025
6. Last Class: Thursday, April 3, 2025
7. Last Lab: Thursday/Friday, April 3/4, 2025
8. Final Exam: *TBD*
9. Final Exam Period: April 9-23, 2025
10. University closures: Louis Riel Day
Good Friday Monday, February 17, 2025
Friday, April 18, 2025

*A minimum of 20% of the work on which the final grade is based will be evaluated and available to the student before the voluntary withdrawal date.

Course Objectives / Learning Outcomes

The course introduces relational databases including their use, design, development, and programming using Microsoft Access and various database design tools. Examples are taken from a number of different subject areas. Specifically, the course:

- Focuses on introductory issues of creating tables, indexes, relationships, forms, reports, queries, structured query language (SQL), and importing/exporting data.
- Introduces database design.
- Introduces normalization and de-normalization of databases.
- Emphasizes hands-on experience through classroom lectures, weekly labs/quizzes, and assignments.

Evaluation Criteria

1. Labs (10%)

- Based on best 10 of 11 labs, worth 1% each
- Labs are to be completed during the Friday lab period
- No late lab submissions will be accepted

2. Assignments (15%)

- 3 assignments, worth 5% each
- Individual due dates will be posted on Nexus
- Assignments will be accepted up to 1 day late with a 20% penalty

Course tools:

The database management system used in the course is Microsoft Access. It is expected that students will use Microsoft Access for all labs and assignments

Lab/assignment submissions:

All work is to be submitted electronically via Nexus. Some labs may be set up as quizzes in Nexus. Database files must be in .accdb format, all written work must be in PDF format and diagrams must be in .jpg format. Further details and submission procedure will be stated in each lab/assignment.

Students are responsible for backing up and protecting their lab and assignment work.

3. Midterm Test (25%)

- During regular class time
- See important dates

4. Final Exam (50%)

- Cumulative

Test / Exam Requirements

- **Student ID** is required for the final exam.
- The use of computers, calculators, phones, or other electronic devices is **not permitted** during exams.
- Midterm and final exams are **closed book**.

Students should contact the instructor as soon as possible if extenuating circumstances require missing a lab, assignment, test or examination. A medical certificate from a practicing physician may be required before any adjustments are considered.

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 2024-25 Undergraduate Academic Calendar online at

<http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf>

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 – 89 %	B	70 – 74%	D	50 – 59%
A-	80 – 84%	C+	65 – 69%	F	below 50%

Required Text Book / Reading List

- Ron McFadyen, Relational Databases and Microsoft Access, Version 3.0, University of Winnipeg, 2016.
- Available at www.acs.uwinnipeg.ca/rmcfadyen/CreativeCommons
- Class notes/slides will be available on Nexus.

Prerequisite Information

- There are no prerequisites, however, there is a restriction that this course cannot be held with the former ACS-2914.

- ACS-2814L (lab) must be taken concurrently.

Regulations, Policies, and Academic Integrity

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).

Avoiding Academic Misconduct: Academic dishonesty is a very serious offense and will be dealt in accordance with the University's policies.

Detailed information can be found at the following:

- Academic Misconduct Policy and Procedures:
<https://www.uwinnipeg.ca/policies/docs/policies/academic-misconduct-policy.pdf> and
<https://www.uwinnipeg.ca/policies/docs/procedures/academic-misconduct-procedures.pdf>
- About Academic Integrity and Misconduct, Resources and FAQs:
<https://library.uwinnipeg.ca/use-the-library/help-with-research/academic-integrity.html>

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.

Academic Integrity and AI Text-generating Tools: Students must follow principles of academic integrity (e.g., honesty, respect, fairness, and responsibility) in their use of material obtained through AI text-generating tools (e.g., ChatGPT, Bing, Notion AI). Use of AI Tools is prohibited in this course: students may face an allegation of academic misconduct if using them to do assignments.”

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/policies/docs/policies/acceptable-use-of-information-technology-policy.pdf>
- Non-Academic Misconduct Policy and Procedures:
<https://www.uwinnipeg.ca/policies/docs/policies/student-non-academic-misconduct-policy.pdf> and <https://www.uwinnipeg.ca/policies/docs/procedures/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/basics/copyright-policy.html>

Privacy

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

- Student Privacy: <https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html>
- Zoom Privacy: <https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html>

Class Cancellation, Correspondence with Students and Withdrawing from Course

It is recommended that electronic communication used for the course utilize a UofW email account to minimize the risk of filtering. The use of an external email address may be blocked and filtered by the anti-spam system, e.g., Gmail, Hotmail, Yahoo, etc.

When emailing the instructor, please use the UofW Webmail system, i.e., webmail.uwinnipeg.ca to communicate with the instructor. Do not use the Nexus email system, i.e., mail.nexus.uwinnipeg.ca, as the Nexus mailbox is not monitored on a regular basis.

The email sent to the instructor must include your full name, your student #, and the COURSE # and SECTION # (like ACS-1803-055) in the subject line of your email. A respectful manner is also expected in email communications

When it is necessary to cancel a class due to exceptional circumstances, the course instructor will make every effort to inform students via UWinnipeg email 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 the 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.

Topics to be covered (tentative)

1. Relational Databases
 - Creating databases – Table, indexes, forms, reports
 - Relationships and referential integrity
 - Queries
2. The relational model
 - Relations
 - SQL
3. Database design
 - Entity-Relation Diagrams
 - Entities, attributes, relationships
 - Mapping to relational databases, DDL
 - Normal forms
 - Functional dependencies,
 - 1NF, 2NF, 3NF
 - BCNF
4. Other topics as time permits

A permitted or necessary change in the 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.