



THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-051, 072L, 073L
Course Name: Applications of Database Systems
Course Webpage: <https://nexus.uwinnipeg.ca/d2l/home/64390>

Instructor Information

Instructor: Amanpreet Kaur
E-mail: am.kaur@uwinnipeg.ca
Office Hours: Thursdays 12:00 pm -1:00 pm 3C08B

Class meeting time: Wednesdays 6:00 pm - 9:00 pm 3D01
Lab time: 072L Thursdays 4:00 pm - 5:15 pm 3D03
073L Fridays 4:00 pm - 5:15 pm 3D03

Important Dates

1. First Class: Wednesday, September 4, 2024
2. First Lab: 072L Thursday, September 5, 2024
073L Friday, September 6, 2024
3. Midterm Test: Wednesday, October 23, 2024
4. Reading Break (No classes or labs): October 14 – October 19, 2024
5. Final Withdrawal Date w/o academic penalty*: Wednesday, November 13, 2024
6. Last Class: Wednesday, November 27, 2024
7. Last Lab: 072L Thursday, November 28, 2024
073L Friday, November 29, 2024
8. Final Exam (Comprehensive): **TBD**
9. University Closures (no classes or labs):
Truth and Reconciliation Day Monday, September 30, 2024
Thanksgiving Monday, October 14, 2024
Remembrance Day Monday, November 11, 2024

*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), 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 11/12 labs, worth 1% each
- Labs are to be completed during the lab period and submitted to Nexus no later than 11:59 pm on that day.
- No late lab submissions will be accepted

2. Assignments (15%)

- Three assignments, each worth 5%
- Individual due dates will be posted on Nexus
- Due at 11:59 pm on the assignment indicated due date.
- No late or handwritten assignment will be accepted. Only under special circumstances e.g., medical, death in a family, etc., and subject to approval before late assignment will be accepted with a 20% penalty off for each late day.
- When submitting your assignment files, please name the file with assignment number, your first name, and student ID e.g., Assignment1_ John _12345. So, for PDF file it should be Assignment1_John_12345.pdf or a Zip file it should be Assignment1_John_12345.zip.
- Assignments that do not meet all the requirements, including those for the submissions, may not be accepted or a portion of the marks will be deducted. Marks will be deducted for not following the file submission format, file naming format and instruction in the assignment.
- Multiple submissions are permitted but will only be accepting the last submission as official final and be marked. Students may submit a partially completed assignment and will receive credit for those attempted problems. Students are responsible for backing up and protecting their assignment work.
- Assignments will be accepted up to 1 day late with a 20% penalty

3. Midterm Test (25%)

- During the regular class time (see Important Dates)

4. Final Exam (50%)
 - Cumulative
 - Date and location to be announced

Course Tools:

The database management system used for this course is Microsoft Access. The workstations in ACS lab 3C13 have Microsoft Access installed. Students will need access to a computer with Microsoft Access outside of class and lab times. Database design tools will also be available in the labs.

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.

Course Delivery

The lectures and the labs will be delivered in person on campus. All course material including lecture notes, slides and assignment/lab details will be available on Nexus. Labs and assignments are to be submitted via Nexus. Submission guidelines will be specified for each lab and assignment. Works that do not follow submission guidelines will not be accepted. Students are responsible for backing up and protecting their lab and assignment work.

Test / Exam Requirements

- Photo ID is required for the exam and midterm.
- 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 or during lectures/laboratories are encouraged to contact Accessibility Services (AS) at 204.786.9771 or <https://www.uwinnipeg.ca/accessibility-services/> to discuss appropriate options. All information about a student's disability or medical condition remains confidential.

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 4.0*, University of Winnipeg, 2021.
 - Available at www.acs.uwinnipeg.ca/rmcfadyen/CreativeCommons
- Class Notes 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

Academic dishonesty is a very serious offense and will be dealt in accordance with 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/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: <https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html>.

More information:

- Zoom and Privacy: <https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html>
- Testing/Proctoring: <https://www.uwinnipeg.ca/privacy/zoom-test-and-exam-proctoring.html>.

Class Cancellation, Correspondence with Students and Withdrawing from Course

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 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
 - Queries
 - Relationships and referential integrity
2. The relational model
 - Relations
 - SQL
3. Database design
 - Entity-Relation Diagrams
 - Entities, attributes, relationships
 - Mapping to relational databases, DDL
 - Normal forms
 - 1NF, 2NF, 3NF, Functional dependencies, BFNF
4. *Other topics as time permits*

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.