THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-001, L-070, L-071
Course Name: Applications of Database Systems
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/72558

Instructor Information

Instructor: Amanpreet Kaur
E-mail: am.kaur@uwinnipeg.ca
Office Hours: Wednesdays   1:30 pm - 2:30 pm   3C08B

Class meeting time: Mons/Weds   2:30 pm – 3:45 pm   5L24
Lab time: L-070   Fridays   2:30 pm - 3:30 pm   3D03
                         L-071   Fridays   3:30 pm - 4:30 pm   3D03

Important Dates

1. First Class: Wednesday, September 3, 2025
2. First Lab: Friday, September 5, 2025
3. Reading week (no classes):   October 12 – 18, 2025
4. Midterm Test: Wednesday, October 22, 2025
5. Final Withdrawal Date without academic penalty*: Wednesday, November 12, 2025
6. Last Class: Monday, December 1, 2025
7. Last Lab: Friday, November 28, 2025
8. Final Exam: TBD
9. Final Exam Period: December 8 – 20, 2025
10. University closures: Truth and Reconciliation Day   Tuesday, September 30, 2025
                          Thanksgiving   Monday, October 13, 2025
                          Remembrance Day   Tuesday, November 11, 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), 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%)
   - Best 10 out of 12 Labs. Each Lab is worth 1% each.
   - Labs are to be completed during the Friday lab period and are required to be submitted to Nexus no later than 11:59 pm on the same day.
   - No late lab submissions will be accepted.
   - When submitting your Lab files, please name the file with lab number, your first name, and student ID e.g., Lab1_ John _12345. So, for PDF file it should be Lab1_John_12345.pdf or a Zip file it should be Lab1_John_12345.zip.

2. Assignments (15%)
   - There will be 3 assignments. Each assignment will be worth 5%, making the total to be 15% of the overall course final grade.
   - Due at 11:59 pm on the assignment indicated due date.
   - Assignments will be accepted up to 1 day late with a 10% penalty. Late or handwritten assignment will not be accepted other than under special circumstances e.g., medical, death in a family, etc., and are subject to approval.
   - Assignments and labs are required to be submitted through Nexus. All coding is to be submitted in *.accdb format, and any written work in pdf format. Further details and submission procedures will be stated in each lab/assignment.
   - When submitting your assignment files, please name the file with assignment number, your first name, and student ID e.g., Assignment1_ John _12345.accdb. 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.
   - Problem solving assignments can be very time consuming. So please start early. Students are responsible to review their assignments before submission to make

sure the correct files are submitted. All assignments are to be completed individually.
- Multiple submissions are permitted but only the last submission will be accepted 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 lab and assignment work.

3. Midterm Test (25%)
   - During the regular class time (see Important Dates)

4. Final Exam (50%)
   - Cumulative

Course Tools:
The database management system used for this course is Microsoft Access. The workstations in ACS lab 3D03 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.

Test / Exam Requirements

- Photo 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 2025-26 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 Textbook / 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.

Requisite Information

- 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: The use of AI tools in this course is prohibited. This includes all forms of generative AI, like ChatGPT, Claude, Gemini, etc., as well as AI writing and paraphrasing tools, such as Grammarly, Quillbot, etc. If you are unsure if the use of a specific technology is permitted, ask the instructor prior to using the tool for coursework. Suspected misuse of AI may result in a report to the Senate Academic Standards and Misconduct Committee.

Non-academic misconduct: Students are expected to conduct themselves in a respectful manner on campus and in the learning environment, irrespective of the 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://www.uwinnipeg.ca/policies/docs/policies/copyright-policy.pdf

Privacy

Students have rights in relation to the collection of personal data by 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
- Exam and 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 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 refund fee.

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, BCNF
4. *Other topics as time permits*

Note that all topics listed may not be covered and chapters will be offered in a slightly different order than they appear in the textbook.

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.

In order to ensure a safe and comfortable learning environment for everyone, we kindly ask that all students refrain from wearing or using scented products while attending class.