THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-050, L-072, L-073
Course Name: Applications of DB Systems
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/73023

Instructor Information

Instructor: Wesley Takeo Konrad
E-mail: w.takeo-konrad@uwinnipeg.ca

Office Hours:		Tuesday	4:45 pm – 5:45 pm	3C07
Class meeting time:		Tuesdays	6:00 pm – 9:00 pm	3D01
Lab time:	L-072	Thursdays	4:00 pm – 5:00 pm	3D03
	L-073	Fridays	4:30 pm – 5:30 pm	3D03

Important Dates

1. First Class:		Tuesday, September 2, 2025
2. First Lab:		L-072: Thursday, Sept. 4, 2025 L-073: Friday, Sept. 5, 2025
3. Reading Break (No Class or Lab):		October 12 - 18, 2025
4. Midterm Exam (in Class):		Tuesday, October 21, 2025
5. Final Withdrawal Date w/o academic penalty*:		Wednesday, November 12, 2025
6. Last Class:		Wednesday, December 3, 2025
7. Last Lab:		L-072: Thursday, November 27, 2025 L-073: Friday, November 28, 2025
8. Final Exam:		*TBD*
9. Final Exam Period:		December 8 – 20, 202
10. University closures:	Truth and Reconciliation Day	Tuesday, September 30, 2025
	Thanksgiving	Monday, October 13, 2025
	Remembrance Day	Tuesday, November 11, 2025
11. Make-up classes/labs on holiday closures:		Wednesday, December 3, 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

This course introduces students with limited computing experience to the principles of data management. The emphasis is on practical database experience reinforced through assignments and weekly laboratory work. Students learn to work with a workstation-based database system and are introduced to the design of databases and their implementation in relational systems. Topics include tables, queries, forms, reports, importing and exporting data, structured query language, entity relationship models, the relational data model, and normalization of databases. Examples, assignments, and laboratory work are drawn from a variety of different disciplines.

Evaluation Criteria

1. **Labs (6%)**
   - Seven (7) labs will be assigned during the duration of the course.
   - The best 6 marks shall be taken and evaluated at 1% each of the final grade.
   - Lab due dates will be communicated via the course website as they are issued.
   - Students are not required to attend lab times in person but may find the available help from the lab assistant valuable.

2. **Assignments (19%)**
   Assignments may be available well in advance of their issue date to assist students in planning their workload/effort. Students should obtain a fresh copy of the assignment on the issue date (announced in class) and note that the assignment is subject to revision until the issue date. Any changes to the assignment schedule below will be communicated via Nexus.

Assignment Schedule

Item	Due (5:59PM unless otherwise noted)	% Value
Assignment 1: Conceptual Data Modeling	Sunday, September 21	4%
Assignment 2: Logical and Physical Data Modeling, Normalization, Implementing Basic Designs in Microsoft Access	Sunday, October 12	5%
Assignment 3: Database Fundamentals: Importing Data, Queries, and Reports	Sunday, November 16	5%
Assignment 4: Developing a Simple Database Application	Sunday, November 30	5%

- All work is to be submitted electronically via Nexus. Each assignment and lab will identify the required format and content of the submission (e.g., PDF, Access database).
- Students are responsible for backing up and protecting their lab and assignment work.

- The use of AI tools to generate answers for assignments or labs is prohibited for this course.

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

4. **Final Exam (50%)**
   - The final exam is cumulative and covers topics from the entire course.

Late Course Work

Coursework (assignments and labs) submitted after the deadline will be subject to up to a 20% deduction. Late assignments and labs will not be accepted 48 hours after the deadline.

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 Text Book / Reading List

- Relational Databases and Microsoft Access, McFadyen, R., 2022 (free online)
- Additional material (class notes, notifications, etc.) will be published on Nexus

Required Software

- Microsoft Access
    - available for installation on Windows-based computers as part of the University's Student Office 365 License
    - also available in the ASC Computer Lab located in 3D03

Pre-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 fee refund.

Topics to be covered (tentative)

1. Introduction to Databases
2. Conceptual Database Modeling
3. Database keys
4. Logical Database Modeling
5. Referential Integrity
6. Database Normalization
7. Design Patterns
8. Queries
9. Data Validation
10. Application Development with Databases

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.