



# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-001, L-070, L-071  
Course Name: Applications of DB Systems  
Course Webpage: <https://nexus.uwinnipeg.ca/d2l/home/70709>

### Instructor Information

**Instructor:** Wesley Takeo\_Konrad  
**E-mail:** [w.takeo-konrad@uwinnipeg.ca](mailto:w.takeo-konrad@uwinnipeg.ca)  
**Office Hours:** Tuesday 7:00 pm – 8:00 pm 3C07

**Class meeting time:** Tuesdays/Thursdays 5:00 pm – 7:00 pm 3D01

**Lab time:** L-070 Tuesdays 3:00 pm – 4:30 pm 3D03  
L-071 Thursday 3:00 pm – 4:30 pm 3D03

### Important Dates

1. First Class: Tuesday, May 6, 2025
2. First Lab: 070L: Tuesday, May 13, 2025  
071L: Thursday, May 8, 2025
3. Reading Break (no class): Wednesday, June 4, 2025
4. Midterm Exam: (No Lab for section L-071) Thursday, June 5, 2025
5. Final Withdrawal Date w/o academic penalty\*: Wednesday, June 18, 2025
6. Last Class: Thursday, July 3, 2025
7. Last Lab: Thursday, July 3, 2025
8. Final Exam: TBD
9. Final Exam Period: July 7-8, 2025
10. University closures (no class):  
Victoria Day Monday, May 19, 2025  
Canada Day Tuesday, July 1, 2025
11. Make-up for class and lab that fall on closure: Thursday, July 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 (5%)**

- Seven (7) labs will be assigned during the duration of the course.
- The best 6 marks shall be taken and equally weighted towards 5% 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.

### **Lab Schedule**

<b>Week</b>	<b>L-070</b>	<b>L-071</b>
1 (May 6 & 8)	No Lab (First Lecture)	Lab 1
2 (May 13 & 15)	Lab 1	Lab 2
3 (May 20 & 22)	Lab 2	Lab 3
4 (May 27 & 29)	Lab 3	Lab 4
5 (June 3 & 5)	Lab 4	No Lab (Midterm)
6 (June 10 & 12)	Lab 5	Lab 5
7 (June 17 & 19)	Lab 6	Lab 6
8 (June 24 & 26)	Lab 7	Lab 7
9 (July 3)	Optional Lab time for extra help	

### **2. Assignments (20%)**

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**

<b>Item</b>	<b>Due</b> (11:59PM unless otherwise noted)	<b>% Value</b>
Assignment 1: Conceptual Data Modeling	Fri, May 16	3%
Assignment 2: Logical and Physical Data Modeling, Normalization, Implementing Basic Designs in Microsoft Access	Fri, May 30	6%
Assignment 3: Database Fundamentals: Importing Data, Queries, and Reports	Fri, June 20	6%
Assignment 4: Developing a Simple Database Application	Fri, July 4	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 on Thursday, June 5, 2025 (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 may be subject to up to a 20% deduction. Assignments or labs submitted more than 48 hours after the deadline **will not be accepted for credit**.

### **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](mailto: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**

- [Relational Databases and Microsoft Access](#), McFadyen, R., 2017 (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 collecting 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)**

<b>Week #</b>	<b>Topic</b>
1	Relational Database Fundamental Concepts, Modeling Notation, and Terminology, Conceptual Data Modeling, Logical Data Modeling from Requirements
2	Logical Data Modeling continued, Physical Database Design, and Basic Implementation Using MS Access
3	Database Normalization
4	Referential Integrity, and Constraints
5	Midterm Review, Midterm Test
6	MS-Access Data Management Fundamentals, Query and DML Essentials: Basic Select, Insert, Update, and Delete
7	MS Access Query Builder: Multi-Table Queries, Outer Joins, and Aggregate Queries, Multi-Table Data Management Screens Using Sub-Forms
8	Building a Simple Database Application
9	Exam Review

*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.*