THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-2814-050, 070L, 071L
Course Name: Applications of Database Systems
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/53552
Lab Webpages 070: https://nexus.uwinnipeg.ca/d2l/home/53750
              071: https://nexus.uwinnipeg.ca/d2l/home/53751

Instructor Information

Instructor: Ron McFadyen
E-mail: r.mcfadyen@uwinnipeg.ca
Office Hours: Tuesdays   3:00-4:00 pm   3D21

Class meeting time: Tuesdays/Thursdays   6:30 - 8:30 pm   3D04
Lab time: L-070 Tuesdays   4:15 - 5:45 pm   3C13
                       L-071 Thursdays   4:15 - 5:45 pm   3C13

Important Dates

1. First Class   Tuesday, May 2, 2023
2. First Lab   L-070   Tuesday, May 2, 2023
                       L-071   Thursday, May 4, 2023
3. Lab Test   L-070   Tuesday, May 23, 2023
                       L-071   Thursday, May 25, 2023
4. Midterm Test   Tuesday, June 6, 2023
5. Final Withdrawal Date w/o academic penalty*   Wednesday, June 14, 2023
6. Last Class   Tuesday, June 27, 2023
7. Last Lab   L-070   Tuesday, June 27, 2023
                       L-071   Thursday, June 22, 2023
8. Final Exam (Comprehensive)   TBD
9. University closure, Victoria Day   Monday, May 22, 2023
10. No class   Tuesday May 30, 2023

*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 several subject areas. Specifically, the course:
- Focuses on introductory issues of creating tables, indexes, relationships, forms, 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, and assignments.

Evaluation Criteria

1. Labs (7%)
   - 7 labs worth 1% each.
   - Labs are to be completed during the lab period unless indicated otherwise.
   - No late lab submissions will be accepted

2. Assignments (10%)
   - 2 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 workstations in ACS labs 3C13 and 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.

   All work is to be submitted electronically. Further details and submission procedures will be stated in each lab/assignment. Students are responsible for backing up and protecting their lab and assignment work.

3. Midterm Tests (see Important Dates, 33%)
   - Lab test (8%), during lab (Tuesday, May 23 / Thursday, May 25)
   - Midterm Test (25%), during regular class time (Tuesday, June 6)

4. Final Exam (50%)
   - Cumulative

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.

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 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 2019-20 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, 2022.
- 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/institutional-analysis/docs/policies/academic-misconduct-policy.pdf and https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-procedures.pdf
- UW Library video tutorial "Avoiding Plagiarism" https://www.youtube.com/watch?v=UvFdxRU9a8g

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.

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/institutional-analysis/docs/policies/acceptable-use-of-information-technology-policy.pdf
- Non-Academic Misconduct Policy and Procedures: https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-policy.pdf and https://www.uwinnipeg.ca/institutional-analysis/docs/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/docs/copyright_policy_2017.pdf

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). If an instructor prohibits the use of AI tools in a course, students may face an allegation of academic misconduct if using them to do assignments. If AI tools are permitted, students must cite them. According to the MLA (https://style.mla.org/citing-generative-ai/), writers should

- cite a generative AI tool whenever you paraphrase, quote, or incorporate into your own work any content (whether text, image, data, or other) that was created by it
- acknowledge all functional uses of the tool (like editing your prose or translating words) in a note, your text, or another suitable location
- take care to vet the secondary sources it cites

If students are not sure whether or not they can use AI tools, they should ask their professors.

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 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 – tables, indexes, forms, 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
       Functional dependencies,
       1NF, 2NF, 3NF,
       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.