

Course Outline

WMDD 4921 — M01: Introduction to Database Technologies

Fall 2025

Course Format: mixed-mode (online and in person)

Credits: 3

Transfer Credit: For information, visit
bctransferguide.ca

Course Description, Prerequisites, and Corequisites:

Developers working in industry must contend with multiple database types and technologies. In this class, students are introduced to the fundamentals of relational and non-relational databases. Students write SQL statements as well as NoSQL programs to create and access databases. Students work on database projects as part of the data persistence layer to their web and mobile applications.

Prerequisites: Enrolled in the Program and have attained a minimum "C" grade in WMDD 4831

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Create relational and non-relational data models for a problem.
- Design a normalized database.
- Explain when to normalize and denormalize a data model
- Write syntactically correct and accurate SQL statements.
- Embed relational and non-relational database technology into a programming or web environment.

Instructor: Jordan Miller

Office: B019j

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ext. 2083 (leave a message)

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Office Hours: see Brightspace announcements

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This schedule is approximate; dates and topics may change throughout the semester. Check Brightspace frequently for updates. Due dates of assignments and the exact dates and times of quizzes and exams will be posted on Brightspace.

Week	Topic
1	Introduction to data and databases; ER diagrams
2	Relational data model; data normalization
3	Introduction to SQL; basic SQL queries; selecting data
4	Ordering, nested queries, range, creating tables, constraints, inserting
5	Aggregate functions, joins, grouping
6	Integration with Node.js
7	Midterm Exam
8	Updating, deleting, importing data
October 25	Last day (before 2100 hours) to withdraw from regular semester courses.
9	NoSQL, MongoDB
10	MongoDB continued
11	Triggers, views, indexes, transactions
12	Project work
December 3 to 15	Final exam period. Do not schedule anything important during this time until you've received your exam schedule from the college.

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

- Student Code of Conduct - E1003
- Academic Integrity - F1004
- Academic Standing - Academic Probation and Academic Suspension - E2008
- Appeal of Final Grade - E2006
- Concerns about Instruction - F1002
- Withdrawal from Courses and Deferred Standing - E2011

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Academic Integrity: Please familiarize yourself with Langara's academic integrity policies. Be aware of the following:

- Consulting online resources (YouTube tutorials, W3Schools, MDN, etc.) or getting help from friends and classmates is encouraged. However, what you submit for evaluation **must be your own work**. This means that you must have written the code yourself and understand it well enough to explain it or reproduce it on the spot. I may ask you to prove that you created the work yourself.
- Using AI-based tools for generating code, written answers, or images is permitted according to the rules in the previous section. Failure to adequately disclose and document your process will be considered plagiarism.
- Do not share your work with classmates:
 - Do not send files to classmates or accept files from classmates;
 - If another student asks you to share your work, please tell me immediately.
 - Do not copy work from another person's screen or allow them to copy your screen;
 - Be aware that if another student somehow obtains your work, even by accident or without your knowledge or permission, you will still be responsible for cheating. Protect your work.
- Do not copy code or other assets from any source without permission from the instructor. If you do use a resource, you must include a reference with a link to the source. Clearly indicate the file names, line numbers, and any other information necessary for me to see where the assets were used; it must be obvious to me which work was created by you and which was borrowed from another source.
- Do not share materials from the course; do not post course materials on the web.

If cheating or plagiarism is discovered, I will submit a report to the college and you will receive a grade of 0. All cases will be reported; there are no warnings. (Consider this to be the warning!) Makeup assignments or exams will not be given.

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