HUMBER

Course Outline

Course Name: Database Design and Development (HTTP 5126)

Academic Period: 2024 - 2025

Faculty: Jemi Choi

Faculty Availability:

Associate Dean: Ahmed Sagarwala
ahmed.sagarwala@humber.ca
Schedule Type Code:

Land Acknowledgement

Humber College is located within the traditional and treaty lands of the Mississaugas of the Credit. Known as Adoobiigok [Adoe-bee-goke], the “Place of the Alders” in Michi Saagiig [Mi-Chee Saw-Geeg] language, the region is uniquely situated along the Humber River Watershed, which historically provided an integral connection for Anishinaabe [Ah-nish-nah-bay], Haudenosaunee [Hoeden-no-shownee], and Wendat [Wine-Dot] peoples between the Ontario Lakeshore and the Lake Simcoe/Georgian Bay regions. Now home to people of numerous nations, Adoobiigok continues to provide a vital source of interconnection for all.

Equity, Diversity and Inclusion Statement

Humber College and the University of Guelph-Humber (Humber) are leaders in providing a learning, working and living environment that recognizes and values equity, diversity and inclusion in all its programs and services. Humber commits to reflect the diversity of the communities the College serves. Students, faculty, support and administrative staff feel a sense of belonging and have opportunities to be their authentic selves.

Faculty or Department	Faculty of Media & Creative Arts
Program(s)	Web Development (11491)
Course Name:	Database Design and Development (HTTP 5126)
Pre-Requisites	none
Co-Requisites	none
Equates	none
Restrictions	none
Credit Value	3
Total Course Hours	42

Developed By: Simon Borer & Jemi Choi Prepared By: Sean Doyle

Approved by:

Ahmed Sagarwala

Humber Learning Outcomes (HLOs) in this course.

The HLOs are a cross-institutional learning outcomes strategy aimed at equipping Humber graduates with the employability skills, mindsets, and values they need to succeed in the future of work. To explore all the HLOs, please consult the Humber Learning Outcomes framework.

Systems Thinking

Critical Thinking

Communication

Digital Fluency

Strategic Problem-Solving

Course Description

This course provides strategies and techniques for designing, creating and interacting with a database. SQL and MySQL languages are the primary focus, with an introduction to NoSQL options.

Course Rationale

Designing and interacting with sources of data are required skills for back-end and full-stack developers.

Program Outcomes Emphasized in this Course

Web Development (11491)

1. Determine and document requirements for web computing projects based on the effective application of stakeholder needs.
2. Design, model, implement and optimize accessible web solutions to meet client requirements and constraints, and align with standards and best practices.
3. Design, model, implement, optimize and maintain databases to support data-driven solutions for web environments.
4. Test, troubleshoot and debug web applications to support requirements and meet Quality Assurance objectives.

Course Learning Method(s)

- Problem Based Learning (PBL)
- Project Based Learning
- Lecture

Learning Outcomes

- Formulate programming statements that will create, read, update or delete data from a data source.
- Design data source architectures for use in web applications.

Assessment Weighting

Assessment	Weight
Quizzes (x5)	12%
Coding Assignments (x9)	68%
Application Project	15%
Project Presentation	5%
Total	**100%**

Modules of Study

Module	Course Learning Outcomes	Resources	Assessments
Introduction to Data Design & Development	• Design data source architectures for use in web applications.	As provided by faculty.	• Quiz, assignment and project
Accessing Data from Database Tables	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
Grouping Results and Aggregate Functions	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
Using Built-in Functions	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
Database Design	• Design data source architectures for use in web applications.	As provided by faculty.	• Quiz, assignment and project
Views & Triggers	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
Custom Functions	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
Stored Procedures	• Formulate programming statements that will create, read, update or delete data from a data source.	As provided by faculty.	• Quiz, assignment and project
User Management	• Design data source architectures for use in web applications.	As provided by faculty.	• Quiz, assignment and project

Project Presentations	• Design data source architectures for use in web applications.		• Project Presentations

Supplemental Resources

Murach, Joel (2019). *Murach's MySQL*. Mike Murach & Associates. ISBN# 978-1-890774-82-0

Additional Tools and Equipment

- Web Hosting that meets program standards.

Essential Skills

Section	Skills	Measurement	Details
Communication	• Reading • Listening • Presenting	Reinforce and measure	• Lectures, exercises, assignments, and projects.
Numeracy	• Understanding and applying mathematical concepts and reasoning • Analysing and using numerical data • Conceptualizing	Teach and measure	• Lectures, exercises, assignments, and projects.
Critical Thinking and Problem-Solving	• Analysing • Synthesising • Decision-Making • Creative and Innovative Thinking	Teach and measure	• Lectures, exercises, assignments, and projects.
Information Management	• Gathering and managing information • Selecting and using appropriate tools and technology for a task or project • Computer literacy • Internet skills	Teach and measure	• Lectures, exercises, assignments, and projects.

Prior Learning Assessment & Recognition (PLAR)

Prior Learning Assessment and Recognition (PLAR) is the formal evaluation and credit-granting process whereby candidates may obtain credits for prior learning. Prior learning includes the knowledge competencies and skills acquired, in both formal and informal ways, outside of post-secondary education. Candidates may have their prior learning evaluated against the course learning outcomes as defined in the course outline.

To find out if this course is eligible for PLAR, and how this learning would be assessed, please contact the Program Coordinator for more details.

Academic Regulations

It is the student's responsibility to be aware of the College Academic Regulations. The Academic Regulations apply to all applicants to Humber and all current students enrolled in any program or course offered by Humber, in any location. Information about academic appeals is found in the **Academic Regulations**.

Anti-Discrimination Statement

At Humber College, all forms of discrimination and harassment are prohibited. Students and employees have the right to study, live and work in an environment that is free from discrimination and harassment. If you need assistance on concerns related to discrimination and harassment, please contact the Centre for Human Rights, Equity and Inclusion or the Office of Student Conduct.

Accessible Learning Services

Humber strives to create a welcoming environment for all students where equity, diversity and inclusion are paramount. Accessible Learning Services facilitates equal access for students with disabilities by coordinating academic accommodations and services. Staff in Accessible Learning Services are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. If you require academic accommodations, contact:
Accessible Learning Services
North Campus: (416) 675-6622 X5090
Lakeshore Campus: (416) 675-6622 X3331

Academic Integrity

Academic integrity is essentially honesty in all academic endeavors. Academic integrity requires that students avoid all forms of academic misconduct or dishonesty, including plagiarism, cheating on tests or exams or any misrepresentation of academic accomplishment.

Disclaimer

While every effort is made by the professor/faculty to cover all material listed in the outline, the order, content, and/or evaluation may change in the event of special circumstances (e.g. time constraints due to inclement weather, sickness, college closure, technology/equipment problems or changes, etc.). In any such case, students will be given appropriate notification in writing, with approval from the Dean (or designate) of the School.

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