

CIS*3530 Data Base Systems and Concepts

Fall 2020

Instructor

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Calendar Description

This course is a study of data organization and data management principles with the perspective of analyzing applications suitable for implementation using a DBMS. This will include an analysis of several data base models, query specification methods, and query processing techniques. Overview of several related issues including concurrency control, security, integrity and recovery. Students will demonstrate concepts through project assignments.

Main Topics

This course provides fundamental concepts and techniques of conventional database systems. Topics include database models and modeling, relational database model and query languages, database design theory, query optimization, and transaction management. Students will also learn skills for application analysis, conceptual database design and implementation using a DBMS. Additional topics include the object-relational database model, and the Hadoop and MapReduce systems for big data.

Teaching Assistants

TBA.

Recommended Textbook:

- R. Elmasri and S. Navathe, *Fundamentals of Database Systems (Seventh Edition)*, Pearson Education Inc, 2019.

Course Moodle Page URL

<http://moodle.socs.uoguelph.ca/>

Assignments and Examinations

- Five assignments: $20\% \times 5 = 100\%$

The **late policy** for assignments is: **NO** late assignment will be graded.

Evaluation Schedule (due dates)

- Assignment 1: Monday, October 5, 2020
- Assignment 2: Monday, October 26, 2020
- Assignment 3: Monday, November 9, 2020
- Assignment 4: Monday, November 23, 2020
- Assignment 5: Monday, December 7, 2020

Statements

- **E-mail Communication**

As per university regulations, all students are required to check their <mail.uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

- **When You Cannot Meet a Course Requirement**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration.

- **Copies of Out-of-class Assignments**

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

- **Accessibility**

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance, and not later than the 40th Class Day. More information: /www.uoguelph.ca/sas/.

- **Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community faculty,

staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note:

All the assignments in this course must be completed individually.

Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it.

Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar.

- **To Appeal a Mark**

To appeal a mark of an assignment you must do so within two weeks after it is returned.