Carleton University
School of Computer Science
COMP 4003A

Transaction Processing Systems
Winter 2024

Instructor: Mengchi Liu

Email: mengchi@scs.carleton.ca

Lectures: Tuesday and Thursday: 2:35PM - 3:55PM

Office Hour: Thursday: 4:00PM - 5:00PM

TAs: Yingjun Dai yingjundai@cmail.carleton.ca
Yanran Guan yanranguan@cmail.carleton.ca

Textbook: Raghu Ramakrishnan and Johannes Gehrke: **Database Management Systems.** Third Edition, McGraw-Hill, 2003. (not required)

Prerequisites: COMP 3005 (Database Management System)

Software: Oracle Virtual Machine

Course Information:

We use **brightspace** to host information about the course such as announcements, lecture slides, TAs' office hours, discussion forums, posting and submitting assignments, and grading.

Course Description:

This course covers the concepts and architectures of transaction processing systems, online transaction processing, transaction properties and models, Embedded-SQL, Dynamic SQL, JDBC, PL/SQL, active rules, consistency maintenance, serializability, concurrency control, recovery, etc.

Attendance

Class presentations will at times go beyond the contents of the textbook, which provides supporting and complementary material. Class attendance is extremely important. No attendance will be taken, though.

Marking Scheme:

Best 4 of 5 Assignments.	40%
Midterm1 (Feb 27)	30%
Midterm2 (Mar 28)	30%

Note:

1. Collaborating on assignments is strictly disallowed. If found, all students involved will be given a mark of 0 and the case will be reported to the office of the Dean of Science.
2. If you need help, please see TAs and/or the instructor during their office hours.
3. Posting assignment solutions on discussion boards before the due date is prohibited and the student involved will be given a mark of 0 for the assignment.
4. Assignments must be submitted to brightspace to be marked. Make sure your uploaded file can be opened and is correct. There is no "grace period" with respect to the deadline. Late assignments are never accepted for any reason. Never email any assignment to the TA or the instructor! Technical problems do not exempt you from this requirement, so if you wait until the last minute and then have issues with your connection, you will still receive a mark of zero. Consequently, you are advised to:
   - Periodically upload your progress.
   - Attempt to submit your final submission at least one hour before it is due.
5. No Self-Declaration Forms will be accepted for missed course work.
6. Any issues regarding assignments and midterm should be brought to the attention of the TA who marked it. Only if the TA does not address the problem to your satisfaction, then you bring the matter to the instructor. This should be done no later than two weeks after this assignment/midterm is marked. After this time, no remarking will be done.
7. For both midterms, e-Proctoring provided by Scheduling and Examination Services will be used and requires the use of webcams, microphones, and smartphones and the installation of CoMaS.
8. You must have at least 45% for both midterms to pass the course.

Undergraduate Academic Advisors

The Undergraduate Advisors for the School of Computer Science are available in room HP5302; or by email at scs.ug.advisor@cunet.carleton.ca. The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit, and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services, and Writing Tutorial Services.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/tech-support/. Technical support staff may be contacted in person or virtually. For details, visit https://carleton.ca/scs/tech-support/contact-it-support/.

SCS Laptop Requirement

Every student who has been enrolled in a 1000-level (i.e., first-year) course offered by the School of Computer Science after the 2020/2021 school year is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. For more information, please visit https://carleton.ca/scs/scs-laptop-requirement/ and then review the requirements at https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/.

University Policy

Academic Accommodations

Carleton is committed to providing academic accessibility for all individuals. Please review the academic accommodation available to students at https://students.carleton.ca/course-outline/.

Academic Integrity

Student Academic Integrity Policy. Every student should be familiar with the Carleton University Student Academic Integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offenses include plagiarism and unauthorized collaboration. Any such reported offenses will be reviewed by the office of the Dean of Science. For more information on this policy, visit https://carleton.ca/registrar/academic-integrity/.

Plagiarism. As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offenses will be reviewed by the office of the Dean of Science. For more information and standard sanction guidelines, visit https://science.carleton.ca/students/academic-integrity/.

Unauthorized Co-operation or Collaboration. Senate policy states that "to ensure fairness and equity in the assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis".

The following are some examples of things you can or cannot do:

- You are not allowed to copy or edit any portion of another student's work such as code, diagram, etc, nor from any websites, but you may use those from the course notes.
- You are not allowed to give your solution (or portions of it) to another student.
- You are not allowed to work on your assignment with other students, with friends, with parents, with relatives, etc.
- You are not allowed to post full or partial assignment solutions on discussion boards or websites such as Facebook, etc.

You must work on every assignment on your own without collaboration with other students. If you need help, see a TA or the instructor. Your assignment will be compared with others in the course and if you are believed to be involved in a plagiarism case in any way, the offense will be sent to the office of the Dean.