

Carleton University  
School of Computer Science  
**Database Management Systems**  
**COMP 3005 B**  
**Fall 2023**

**Instructor:** Mengchi Liu [mengchi@scs.carleton.ca](mailto:mengchi@scs.carleton.ca) HP 5364

**Lectures:** Monday & Wednesday: 10:05 – 11:25 AM

**Office Hour:** Wednesday 11:30 - 12:30PM

**Teaching Assistants:**

Raymond W. Chan	RaymondWeimingChan@cmail.carleton.ca	M 4:00-5:00	HP3115
Rhythm M. Shan	RhythmManishShah@cmail.carleton.ca	T 4:00-5:00	HP3115
Ryan Lo	ryanlo@cmail.carleton.ca	W 4:00-5:00	HP3115
Yuelin Liu	yuelinliu@cmail.carleton.ca	R 4:00-5:00	HP3115
Yingjun Dai	yingjundai@cmail.carleton.ca	F 3:00-5:00	HP3115

**Course Website:** <https://carleton.ca/brightspace/>

**Prerequisites:** COMP 1805 with a minimum grade of C-, and either 2402 or (SYSC 2004 and SYSC2100)

**Textbooks:**

1. Ramez Elmasri and Shamkant B. Navathe: Fundamentals of Database Systems. Seventh Edition. Available online
2. Suzanne W. Dietrich: Understanding Relational Query Languages. Prentice Hall, 2001 (optional)



**Software:** [Oracle](#) and/or [Virtual Machine](#) and/or [Openstack](#)

**Course Description:**

Introduces students to concepts of database management systems, data models, query languages, database design, normalization theory, and physical data organization.

- Database History
- Relational Model
- Query Languages
- ER Model
- EER Model
- ER/EER to Relation Mapping
- Normalization Theory
- Extended Relational Model
- Physical Data Organization

**Assessment Scheme:**

Assignments (6)	25%
Midterm (Oct 30 <sup>th</sup> Online Exam during class time)	25%
Final (Centrally Scheduled Online Exam)	50%

**Notes:**

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 a TA or the instructor during their office hours.
3. Posting assignment solutions on discussion boards before the due date and time is prohibited and the student involved will be given a mark of 0 for the assignment.
4. Assignments must be submitted to Brightspace in order to be marked. Assignments are allowed to be submitted one day late with 10% penalty. After one day, no submission will be accepted.
5. Never email any assignment TAs 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 (e.g., upload your progress at least daily).
  - Attempt to submit your final submission at least one hour in advance of the due date and time.
6. Any issues regarding assignment and midterm marks should be brought to the attention of the TA who marked it (only if the TA does not address the problem to your satisfaction should you bring the matter to the instructor). However, this has be done **no later than two weeks** after the marks of this assignment/midterm are posted. After this time, **no remarking will be done**.
7. For the midterm and final exams, e-Proctoring services provided by Scheduling and Examination Services will be used and requires the use of webcams, microphones, and smart phones. You can find more information at <https://carleton.ca/ses/e-proctoring/>.
8. Midterm covers everything learned in class up to and including the last lecture prior to it.
9. Final covers everything learned in class.
10. Students must have at least 45% for the final to pass the course.

**Undergraduate Academic Advisors**

The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at [scs.ug.advisor@cunet.carleton.ca](mailto: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.

**Graduate Academic Advisors**

The Graduate Advisors for the School of Computer Science are available in Room 5302 HP; or by email at [grad.scs@carleton.ca](mailto:grad.scs@carleton.ca). The graduate advisors can assist with understanding your academic audit and the remaining courses required to meet graduation requirements.

## **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, see this page for details: <https://carleton.ca/scs/tech-support/contact-it-support/>.

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## **University Policies**

For information about Carleton's academic year, including registration and withdrawal dates, see [Carleton's Academic Calendar](#).

**Pregnancy Obligation.** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit [Equity Services](#).

**Religious Obligation.** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit <https://carleton.ca/equity/focus/discrimination-harassment/religious-spiritual-observances/>.  
**Academic Accommodations for Students with Disabilities** If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the [Paul Menton Centre](#) website.

**Survivors of Sexual Violence.** As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [carleton.ca/sexual-violence-support](https://carleton.ca/sexual-violence-support)

**Accommodation for Student Activities.** Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see [the policy](#).

**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 awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Examples of punishable offences include: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found [here](#).

**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 offences will be reviewed by the office of the Dean of Science. Standard penalty guidelines can be found [here](#).

**Unauthorized Co-operation or Collaboration.** Senate policy states that "to ensure fairness and equity in 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". Please refer to the course outline statement or the instructor concerning this issue.

**Special Information.** It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are a number of actions you can take to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

**Feeling sick?** Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's symptom reporting protocols.

**Masks:** Carleton has paused the COVID-19 Mask policy, but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

**Vaccines:** While proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in cuScreen as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 website and review the Frequently Asked Questions (FAQs). Should you have additional questions after reviewing, please contact [covidinfo@carleton.ca](mailto:covidinfo@carleton.ca).

**Doctor's note or medical certificate:** in effect for Winter 2023 term. In place of a doctor's note or medical certificate, students are advised to complete the [self-declaration form](#) available on the Registrar's Office website to request academic accommodation for missed course work including

exams and assignments. Students should also discuss with the course instructor the required accommodations arising from the COVID-19 situation.