
Course Information

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| Instructors: | Ahmed El-Roby and Abdelghny Orogat | Lecture Location: | Posted in Carleton Central |
| Email: | ahmedelroby@cunet.carleton.ca abdelghny.orogat@carleton.ca | Lecture Time: | Section A: Monday: 11:35 am-12:55 pm Wednesday: 11:35 am-12:55 pm Section B: The classes will be recorded and uploaded to Brightspace on the same day. |
| Office Hours: | Posted in Brightspace | | |
| Teaching Assistants: | Posted in Brightspace | | |
| TAs Office Hours: | TA office hours start on the week of January 22nd. Office hours' dates and times can be found on Brightspace. | | |
| Prerequisites: | COMP 1805 with a minimum grade of C-, and either 2402 or (SYSC 2004 and SYSC2100) | | |

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

Course Description

Students will delve deep into the world of databases, exploring foundational topics from database introduction to advanced areas like NoSQL. Emphasis will be placed on SQL mastery, relational design, application development, and various NoSQL database models.

List of Discussed Topics:

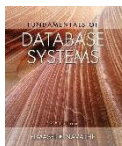
- Databases Introduction.
- Relational Model.
- Comprehensive SQL Coverage (DDL, DML, DQL).
- Relational Database Design.
- Application Development.
- Physical Storage Systems & Data Storage Structures.
- Query Processing & Optimization.
- Introduction to NO SQL.
- NO SQL Types (Document-Oriented, Graph-Oriented with various examples like MongoDB, RDF, SPARQL, Neo4J).

Textbook

The textbooks are not mandatory in the course and are meant to be used as an extra source of reference to complement the topics discussed in class.



Avi Silberschatz, Henry F. Korth, and S. Sudarshan. Database System Concepts. Seventh Edition. McGraw-Hill. ISBN 9781260084504. (Optional)



Ramez Elmasri and Shamkant B. Navathe: Fundamentals of Database Systems. Seventh Edition. (Optional)

Marking Scheme

| Grading Components | Weighting |
|----------------------------------|-----------|
| Assignments | 30% |
| Project | 30% |
| Final (Centrally Scheduled Exam) | 40% |

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. The best 4 of 5 assignments will count towards the final grade.
6. No Self-Declaration forms will be accepted for missed course work.
7. Never email any assignment to the 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 the assignments should be brought to the attention of the TA who marked them (only if the TA does not address the problem to your satisfaction should you bring the matter to the instructor). However, this has to 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. The final covers everything learned in class.
8. 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. 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, see this page for details: <https://carleton.ca/scs/tech-support/contact-it-support/>.

SCS Laptop Requirement

Every student that 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 Policies

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 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

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.