Course Information:

Lecture: Section A: Tuesday & Thursday, 08:35 - 09:55
Section B: Tuesday & Thursday, 13:05 - 14:25
Location: Please check on Carleton Central for the room location
Course Website: Please check on Brightspace for more details. "Merge COMP3007 A:B"
https://brightspace.carleton.ca/d2l/home
Date Range: January 06, 2025 - April 26, 2025
Section Type: In-Person

Instructor: Sean Benjamin (Him/He)
Email: seanbenjamin@cunet.carleton.ca

Teaching Assistants:

Once available, TAs' contact information and office hours will be posted on Brightspace.

Course Description:

An introduction to alternative programming paradigms such as functional, constraint-based, concurrent, and logic programming.

Prerequisite Courses: COMP 1805 (minimum grade of C-) and COMP 2402

Students are not required to purchase any textbooks or learning materials for this course (available for free). The required textbooks are:

- **Scheme: Structure and Interpretation of Computer Programs by Harold Abelson and Gerald Jay Sussman.**
- **Prolog: "Prolog Programming a First Course" by Paul Brna, available on BrightSpace in the Materials module.**

Topics Covered

Here is a list of the main topics covered:
- Introduction to programming paradigms
- Introduction to functional programming (using Scheme)
- Procedural abstractions and recursive design

- Data abstractions
- Environments, Bindings, and Scoping Rules
- Modularity in object state
- Metalinguistic abstraction
- Introduction to logic programming (using Prolog)
- Recursive logic programming

Laptop Requirement (School of Computer Science):

A **laptop** is required for every student enrolled in a 1000-level (i.e., first-year) course offered by the School of Computer Science after the 2020/2021 school year. For more information, please visit https://carleton.ca/scs/scs-laptop-requirement/ and then review the requirements at https://carleton.ca/scs/scslaptop-requirement/laptop-specs/.

Course Evaluation

Final grades will be determined using the scheme below, and **no extra credit assignments will be provided under any circumstances**. **Refer to the tentative calendar in Brightspace (Course Information module) for assignment and quiz due dates.**

Component	Weight	Details	Due Date (Eastern Standard Time)
Assignments	35%	Take the best 4 out of 5 assignment grades towards your final grade.	**Assignment 1: January 24, 2025. Assignment 2: February 7, 2025. Assignment 3: February 28, 2025. Assignment 4: March 14, 2025. Assignment 5: April 8, 2025.** Assignments 1, 2, 3 and 4 are due on Fridays by 23h59 and have a grace period until Sunday 23h59. No grade deductions during the grace period. **Assignment 5** is due on the last day of school, April 8, by 23h59 and **no extension or grace period.**
Quiz	30%	15% each, In person during the class time. Both quizzes will count toward your final grade.	Quiz 1: **February 13, 2025** Quiz 2: **March 27, 2025**
Final Exam	35%	Formal Exam	To Be Announced By the University

Assignments:
Assignments will be announced and available on Brightspace. They must be submitted electronically before the due date. Make sure you submit your assignment before the deadline in case of a problem with Brightspace. You can resubmit the work; **only** the latest submission will be graded.
For each assignment, you will be submitting files containing source code, which must have the correct filenames and the specified format. **If any source code files you submit do not run, they will receive a mark of 0.** Consequently, after you upload your submission, you are required to re-download it immediately and ensure that:

- Your submission had the correct file type (extension) and filename.
- Each source code file can be executed in DrRacket (Scheme) or SWI-Prolog (Prolog).
- No missing or corrupt files.

An assignment submitted one second after the grace period is late will receive a mark of 0. 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 0. Consequently, you are advised to periodically upload your progress and/or attempt to submit your final submission at least one hour in advance of the due date and time.

No provision is made for missed assignments beyond the fact that only the best four (4) of the five (5) assignments will be used when determining the final grade.

Quizzes:
The quizzes will examine your understanding of the assignments, homework and lecture material. You are required to attend the quizzes in person. The quizzes will be held during class hours. Refer to the quiz dates in the course evaluation table. <mark>Students with an illness on the day of a quiz may be granted an exemption only if they submit a copy of Carleton's request for academic consideration</mark> (in lieu of a medical certificate) <mark>form</mark>, available online from https://carleton.ca/registrar/academic-consideration-coursework-form/. Note medical exemption will only considered if the student contacts the instructor **within three (3) business days** of the assessment.

Please note that a student cannot, for any reason, be exempted from more than one (1) of the quizzes.

Marking Issues:
It is your responsibility to ensure that your quiz and assignment marks posted to Brightspace are correct, and you must do so within <mark>one week</mark> of the date the marks were released. Appealing your grading must be communicated within a week after the release of the grade:

1. First, contact the teaching assistant who graded your assignment and/or quiz.

2. If you still have a grading dispute, please contact the instructor with the communication history between the student and the TA. Note that if the instructor needs to regrade your work, the grade may increase or decrease.

After that one week, no further consideration will be offered, and any student requests to correct or revise marks will not be accepted.

AI Usage:

Many of the assessed activities in this course were designed to be completed by an individual working alone. Unless it is explicitly stated otherwise, the use of any AI system will be considered academic misconduct. This includes but is not limited to, chatbots or code generators (e.g., ChatGPT, Google Gemini, Microsoft Copilot), research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E), etc. An exception to the above rule is made for automated grammar and punctuation-checking tools (such as Grammarly).

Important Considerations

As the course is conducted in person, no recordings will be posted to Brightspace.
==**The grading scheme will remain unchanged under any circumstances, which means I cannot shift the weights of quizzes or assignments. No make-up assignments or quizzes will be provided.**== Students are invited to **discuss any concerns with the instructor at the earliest opportunity.**

You are expected to demonstrate good programming practices at all times. You are always required to observe file name and format requirements, use meaningful variable names and type-hinting, and thoroughly comment on your code. Please also note that your code will be penalized if poorly written, and a functional but poorly designed solution will not receive full marks.

You are also expected to do the necessary preparatory work before you begin programming. You may be asked to present either pseudocode or a flowchart before you receive assistance from the instructor or a teaching assistant. **In addition to attending lectures, students can expect to spend at least eight (8) hours per week on this course.**

Students are responsible for all course materials. All materials created for this course (including, but not limited to, lecture notes, in-class examples, exercises, assignments, examinations, and posted solutions) remain the intellectual property of the instructor. These materials are intended for the personal and non-transferable use of students registered in the current course offering. Reposting, reproducing, or redistributing any course materials, in part or in whole, without the written consent of the instructor is strictly prohibited.

Students are asked to pose all questions related to course content using the official discussion boards; students must avoid emailing the instructor directly unless the question contains confidential or personal information. The instructor will attempt to answer every student's email received **within three business days** of receiving the message unless the email requests information already posted on the official discussion boards or as an announcement, or in the course outline. To ensure that all announcements are received, **students are expected to check their email on a daily basis. Students are still responsible for reading the course announcement even if they have turned off the announcement forwarding in BrightSpace.**

If you need clarification on the expectations regarding academic integrity (e.g., how to use and cite references, whether lab collaboration or classmates is permitted (and, if so, to what degree), you must ask your instructor.

Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is always considered academic misconduct (at any time, even after the course has concluded). You are only permitted to post, share, or upload course materials (even for portfolio purposes) if you receive explicit permission from your instructor. Academic integrity offenses are reported to the office of the Dean of Science. Information, processes, and penalties for such offenses can be found on the ODS webpage: https://science.carleton.ca/students/academic-integrity/

Land Acknowledgement

We, the people of the Faculty of Science at Carleton University, acknowledge that our campus is located on the traditional, unceded territories of the Algonquin Anishinabeg people. Miigwetch for your hospitality and stewardship of this territory and the teachings that come from it. We are grateful for this land, the air that we breathe, and the water that sustains us all as well as for the animals, plants and other living beings: these enable us to research, teach, mentor, support, study, and learn. We recognize our responsibility to our natural environment and to reconciliation with Indigenous peoples.

University Policies:

Collaboration: **Assignments must be done individually** and should be your work. For assignments, you are encouraged to discuss your thoughts and ideas with classmates. However, you cannot share code with classmates or submit anything except your work.

Cheating: Cheating is strictly prohibited during an exam. It includes copying another person's work, sharing your work with another person, or in any way conspiring to dishonestly get a grade.

Plagiarism: All cases of plagiarism or cheating will be pursued through official university channels. Academic integrity offenses are reported to the office of the Dean of Science.

Penalties for such offenses can be found on the academic integrity webpage. If you need clarification on the expectations regarding academic integrity, please ask your TAs or instructor. For more details, please visit: https://science.carleton.ca/students/academic-integrity/

Academic Calendar: Carleton's academic year, including registration and withdrawal dates, see Carleton's Academic Calendar at: https://calendar.carleton.ca/academicyear/

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: https://carleton.ca/pmc

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: https://carleton.ca/womensstudies/resources-and-links/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/

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, please visit: https://carleton.ca/sexual-violence-support.

Student Academic Integrity Policy
Every student should be familiar with the Carleton University student academic integrity policy. A student violating academic integrity standards may be awarded penalties ranging from a reprimand to receiving an F grade in the course or even being expelled from the program or university. For more information, please visit: https://carleton.ca/registrar/academic-integrity/

University Policies Accommodation for Student Activities
Carleton University recognizes the substantial benefits to the individual student and the university resulting from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform nationally or internationally. 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 at:

https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf.