Programming Paradigms

W, F 14:35 – 15:55
Instructor: F. Oppacher
Office Hours: W 4 pm – 5:30 pm, HP 5368
Email: oppacher at scs dot carleton dot ca
Course website: http://oppacher.net/3007/
TAs: will be announced on the course website

Topics include:
semantics of functional programming, assignment-free programming, the meta-circular interpreter, recursive functions, Prolog, backtracking, cutting, negation.
Prerequisite: two of COMP 2402, COMP 2404, COMP 2405 or their equivalents.

Introduction to Scheme
Building abstractions
   With procedures
   With data
Modularity in Object State
Environments
Metalinguistic abstractions

Introduction to Logic Programming
Programming with Prolog
Recursive Logic Programming
The Prolog Cut

Evaluation
Final: 55%
   Will consist of multi-choice, definitions, and programming
   Note: a passing grade on the final is needed to pass the course
Midterm: 15%
   Will consist of multi-choice, definitions, and programming
Assignments: 30%
   4 assignments, probably 3 Scheme, 1 Prolog
Note: The assignments will be accessible from the course web page. Assignments must be submitted on cuLearn before the due date and time. Late assignments will
not be accepted. Poor Testing or inadequate documentation will be heavily penalized. 25% of assignment marks for testing and documentation. Fabricated test output will result in 0 marks for a question. You must use DrRacket for Scheme assignments. You must use SWI Prolog for Prolog assignments.

Undergraduate Academic Advisor
The undergraduate advisor for the School of Computer Science is available in Room 5302C HP, by telephone at 520-2600, ext. 4364 or by email at undergraduate_advisor@scs.carleton.ca. The advisor can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and the Writing Tutorial Services.

University Policies
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. Some examples of offences are: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found in the Undergraduate Calendar.

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.

Unauthorized Co-operation or Collaboration
All assignments are to be completed on an individual basis. Collaborating on assignments is strictly disallowed. You must complete the work by yourself. If you need help, please see a TA or your instructor. Posting assignment solutions on discussion boards before the due date and time is also prohibited.

Equity Statements
You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me 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 the Equity Services website: http://www2.carleton.ca/equity/

Religious obligation: write to me 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 the Equity Services website: http://www2.carleton.ca/equity/

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring
academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your **Letter of Accommodation** at the beginning of the term, and 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 me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at [http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/](http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/)

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at [http://www2.carleton.ca/equity/](http://www2.carleton.ca/equity/)

**Medical Certificate**
The following is a link to the official medical certificate accepted by Carleton University for the deferral of final examinations or assignments in undergraduate courses. To access the form, please go to [http://www1.carleton.ca/registrar/forms/](http://www1.carleton.ca/registrar/forms/)