COMP 2402B - Winter 2016

Abstract Data Types and Algorithms

Course Outline : December 31, 2015 Preliminary

People

Instructor	M. Jason Hinek (contact info)
Teaching Assistants	tba
Office Hours	tba

Course Information

Classroom	Building: Room:
Class Times	Days: Monday & Wednesday Time: 10:05am - 11:25am
Course Website	`https://www.carleton.ca/culearn/`
Discussion Group	`https://www.carleton.ca/culearn/`

Calendar Description

Introduction to the design and implementation of abstract data types and to complexity analysis of data structures. Topics include: stacks, queues, lists, trees and graphs. Special attention is given to abstraction, interface specification and hierarchical design using an object-oriented programming language.

Prerequisites

One of COMP 1406, COMP 1006, SYSC 2004, with a minimum grade of C-.

Precludes additional credit for COMP 2002 (no longer offered), SYSC 2002 (no longer offered), SYSC 2100.

Note: Students who are granted equivalencies or transfer credits in lieu of the prerequisite course(s) are responsible for ensuring that they are comfortable with all prerequisite course content.

Textbooks

There is one required textbook for the course:

Pat Morin, **Open Data Structures : An Introduction (in Java)**, AU Press, 2013. (Author's page)

Printed and bound versions of the book are available in the bookstore (or online). The book is available for free in PDF (and source) form from the author's website.

Evaluation

Your performance in this course is assessed using several components: assignments, two midterm exams and a final exam. Please note that in order to receive a passing grade in this course, you must obtain a passing grade in the exam portion of the course (weighted average of midterms and final). The weights for each component is given in the following table.

A	Assignments	40	Ten assignments (written and coding)
M1	Midterm Test 1	15	In-class February 3 (tentative)
M2	Midterm Test 2	15	In-class March 16 (tentative)
F	Final Exam	30	3 hour exam (scheduled by the university)
	total	100	

★ **Note:** You must pass the weighted average of your midterm (M = M1 + M2) and final exam (F) in order to pass the course. Your final grade will be determined using the following

```
if (M+F >= 30) then
   final grade is minimum( A+M+F, 100 )

otherwise
   final grade is minimum( 2*(M+F), A+M+F )
```

Note: Each assignment will either be coding (in which you will submit Java source code to the testing server) or it will be theory (in which you will submit a PDF to cuLearn).

Additional Notes

Including the time spent attending lectures, students can expect to spend at least ten (10) hours per week on this course. Students are responsible for all course materials. This includes lecture notes, readings from the textbook, extra problem sets if given, and all materials discussed in class and on any of the official discussion boards.

Questions pertaining to the marking of assignments should be sent to the teaching assistant(s) that completed the marking, and, unless the student wishes to share information of a personal or confidential nature, all questions should be asked on the official forums and not via email.

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

Collaboration Policy

★ You may collaborate at the conceptual/problem-solving level for assignments, but you must write your own solutions and code.

The full plagiarism policy for COMP 2402 is posted on the courses cuLearn page (https://www.carleton.ca/culearn/). You are expected to read this document (as we will be enforcing it in this course).

Note: Posting assignment solutions on discussion boards before the due date and time is strictly prohibited Asking questions about assignments on discussion boards other than the course discussion group is strictly prohibited.

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 undergraduate 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

Full academic regulations are found in the University's calendar (link). Some excerpts are below.

Academic Integrity

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 is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own. Plagiarism includes reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source.

In cases where an investigation determines that a violation of the Academic Integrity Policy has occurred, sanctions may be applied by the Faculty Dean, the Provost and Vice President (Academic), or by Senate Executive.

Sanctions may include but are not limited to completion of a remediation process, a written reprimand, assignment of a failing grade, withdrawal from a course, suspension from a program, suspension or expulsion from the university.

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/

Religious Obligations

Carleton University accommodates students who, due to religious obligation, must miss an examina-

tion, test, assignment deadline, laboratory, or other compulsory event. The University has a Senate-approved policy on religious accommodation that forms part of its Human Rights Policy, available at: http://www2.carleton.ca/equity/

Accommodation will be worked out directly and on an individual basis between the student and the instructor(s) involved. Students should make a formal written request to the instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist, but in no case later than the penultimate week of classes in that term.

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/

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://www.carleton.ca/registrar/forms/