

CIS 2520 Data Structures

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University of Guelph

Course Objectives :

- CIS 2520 will convey the concept of commonly used data structures as well as their representation, uses, and algorithms for their traversal and manipulation. The emphasis is on using these structures in implementations and assessing the relative effectiveness of alternative implementations.
- Students will acquire the skill of designing and implementing abstract data structures and applications in C.

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- ◆ Data structures will include lists, stacks, queues, strings, trees, dictionaries, hash-tables, and graphs.
- ◆ Algorithms used include searching, sorting, text processing using the above data structures.
- ◆ On exams and assignments, students are asked to solve problems using analytical methods and programming skills acquired from lectures and labs to demonstrate knowledge and comprehension of course material.

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➤ Prerequisite(s):

CIS*2500,
(CIS*1900 or CIS*1900).

➤ Text Book:

Thomas A. Standish

**Data Structures, Algorithms &
Software Principles in C**
Addison Wesley

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Course Information and Schedule:

Course webpage can be found at:

http://snowwhite.cis.uoguelph.ca/faculty_info/xli/courses/web2520/mainpage.html

Lectures schedule

Time: Tuesdays/Thursdays 2:30-3:50 PM
Class Room: MACK 029
Office Hour: Tuesdays 9:00-11:00 AM

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Lab Schedule:

Lab Schedule and Location:

Sec. 101: Mon. 9:30 – 11:20 ROZH 108
Sec. 102: Tues. 12:00 – 1:50 ROZH 109
Sec. 103: Wed. 9:30 – 11:20 MACK 029

TA's Email Addresses:

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Course Evaluation:

4 Assignments: equally weighted 7%
28%
Midterm Test: 22%
Final Exam: 50%
Total: 100%

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Course Topics:

- Review of C, pointers, recursion
- Intro of algorithm complexity analysis
- Stacks, queues, strings, and lists
- Trees
- Priority queues
- Dictionaries and hashing
- Searching
- Sorting
- Graphs

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Important Dates:

Thursday 10/09/2009:	Classes begin
Thursday 29/9/2009:	Assignment #1 Due
Thursday 20/10/2009:	Assignment #2 Due
Thursday 29/10/2009:	Midterm Test
Thursday 10/11/2009:	Assignment #3 Due
Thursday 01/12/2009:	Assignment #4 Due

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Important Notes:

- Late assignments are **NOT ACCEPTED**.
- Missed midterm test results in a mark of **zero**, unless (see next item).
- Illness and severe circumstances may be accommodated, email your instructor at least 48 hours **before** the due time and provide certification whenever possible.

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Important Notes:

- ⊕ Your final grade will be based on the grading system published in the university calendar.
- To appeal a mark on an assignment, or the midterm test you must do so within two weeks after they are handed back.
- Each assignment will indicate its due time and date.
- Academic misconduct includes the submission of program code or assignment answers that appear so similar to another student's work as to be semantically indistinguishable. Misconduct cases will be handled swiftly, discreetly, and summarily by the Department in accordance with University principles.

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