CS 2412 Data Structures
Winter, 2023

General information:

Instructor: Dr. Ruizhong Wei

Email: `rwei@lakeheadu.ca`

Text: R. F. Gilberg and B. A. Forouzan, Data Structures, A pseudo code approach with C, Course Technology, 2005

Time and location: MW 11:00 am - 12:30pm, E002

Labs: M 5:00 - 6:00 pm, K002

Office hours: M 2:30-3:30 pm. , TBA

Course web: `http://ccc.cs.lakeheadu.ca/cs2412.html` (Currently the web page only can be accessed behind the university's VPN.)

Prerequisite: COMP 1030, 1008, 2006

Description:

This course introduce abstract data structures and basic data structures such as stacks, queues, lists, linked lists, trees, graphs etc. which are basic elements for building algorithms. Applications of these data structures to recursion, simulation, searching and sorting algorithms will be investigated. Basic complexity analysis of algorithms will be discussed. The theory is reinforced by laboratories, where structured programming using C and C++ standard libraries will be used for implementations.

Materials:

Based on lecture notes, though the text book will be refereed frequently. Most lecture materials will be put in course D2L.

Assignments:

There will be 4-5 assignments in this term. Late assignments will be penalized and will not be accepted after 3 days.

Assignments hand in and marks are through D2L.

Labs: Lab work will using students' own computers and open source software.

Examinations:

The regulation of examinations and related matters is described on University's Calendar. This course will have a written final exam.

Course grade:

To determine the final grade of the course, the following weights will be applied:

- Assignments: 35%

- Labs: 30%

- Final exam: 35%

Note:

The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences will be strictly enforced.

The following rules shall govern the treatment of candidates who have been found guilty of attempting to obtain academic credit dishonestly. (a) The minimum penalty for a candidate found guilty of plagiarism, or of cheating on any part of a course will be a zero for the work concerned. (b) A candidate found guilty of cheating on a formal examination or a test, or of serious or repeated plagiarism, or of unofficially obtaining a copy of an examination paper before the examination is scheduled to be written, will receive zero for the course and may be expelled from the University.