

**CS 1411**

**Winter 2024**

**Department of Computer Science**

**(2024W) COMP-1411-WB - Computer Programming I**

# 1. Course Information

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| **Catalog**  **Description** | A first course in programming given in C - mathematical problem solving, program development, C grammar and simple system functions. Students will develop and write their own programs and run them in a time-sharing environment. |
| **Credit Hours** | 3 |
| **Prerequisite** | One credit in Grade 12 U Mathematics recommended |
| **Course Type** | Lecture |
| **Required/Elective** | Required |
| **Textbook** | C How to Program, by Deitel & Deitel, any edition >= 6E. |
| **References** | <https://www.w3schools.com/c>  <https://www.w3resource.com/c-programming-exercises/>  <https://codeforwin.org/c-programming/basic-programming-practice-problems> |
| **Instructor** | Dr. Abedalrhman Alkhateeb  Office: AT 5029  Tel: (807) 343-8110 ext. 8310  E-mail: [aalkhate@lakeheadu.ca](mailto:aalkhate@lakeheadu.ca) |
| **Class Schedule** | Mon, Wed: 2:30-4:00 PM BB 2006 (LEC) |
| **Office Hours** | Mon, Wed: 4:00pm – 5:30pm |
|  | The student must be registered in one of the following labs:  COMP-1411L-W2 T 12:30-1:30 PM AT 3002 (LAB) |
| **Teaching Assistant** | TBA |

# 2. Course Topics

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| **Topic(s)** |
| Introduction to Computers and C programming |
| Control Structures |
| Structured Program Development in C |
| C Program Control |
| C Functions |
| C Arrays |
| C Pointers |
| C Characters and Strings |
| C Formatted Input/Output |
| C Structures, Unions, Bit Manipulations and Enumerations |
| C File Processing |
| C Data Structures |
| C Preprocessor |
| Other C Topics |

**\* Book chapters are provided for reference only. You are responsible for the material taught in class.**

**3. Course Outcomes**

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| **Upon completion of this course, students will be able to:**   1. Configure and Navigate within development IDE to edit, compile and execute programs. 2. Identify and Apply Elements of a computer program, incl. I/O, Loops, Logical Blocks, Functions, Arrays and Pointers as per problem at hand. 3. Use and justify appropriate data types for programming problem. 4. Design structured programs with effective algorithms using a combination of standard and User-defined constructs. 5. Explain solution to professor or committee to highlight design choices and justify technical decisions. |

**4. Assessments**

First Exam 25% In the Fifth week

Second Exam 25% In the 10th week

Labs 10%

Final Exam 40% TBA

* The number of assignments and quizzes is not fixed and the weight is tentative.

# 5. Expected level of proficiency from students entering the course

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| Mathematics | Discrete Math |

# 6. Integrity:

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.

**7. Supports for Students**

There are many resources available to support students. These include but are not limited to:

* [Health and Wellness](https://www.lakeheadu.ca/students/wellness-recreation/student-health-and-wellness)
* [Student Success Centre](https://www.lakeheadu.ca/current-students/student-success-centre)
* [Student Accessibility Centre](https://www.lakeheadu.ca/current-students/student-services/accessibility/)
* [Library](https://library.lakeheadu.ca/)
* [Lakehead International](https://www.lakeheadu.ca/international)
* [Indigenous Initiatives](https://www.lakeheadu.ca/indigenous)

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services (SC0003, 3438047 or sas@lakeheadu.ca)