Faculty of Science
CSCI 2010U: Data Structures

## Course Flow Fall 2023

| Weeks | Lectures | Topics | Assessments |
|---|---|---|---|
| Week 1 (Sep 05 – 08) | Lecture 1 | Introduction to Java I | |
| | Lecture 2 | Introduction to Java II | |
| Week 2 (Sep 11 – 15) | Lecture 3 | Inheritance in Java | Lab 1 |
| | Lecture 4 | Polymorphism and Interfaces in Java | |
| Week 3 (Sep 18 – 22) | Lecture 5 | Algorithm Analysis I | Lab 2 |
| | Lecture 6 | Algorithm Analysis II | |
| Week 4 (Sep 25 – 29) | Lecture 7 | Arrays in Java | Lab 3 |
| | Lecture 8 | Collections and Array Optimization | |
| Week 5 (Oct 02 – 06) | Lecture 9 | Stacks and Queues in Java | Lab 4 |
| | Lecture 10 | **Mid Term Exam** | **Mid Term Exam** |
| **Week 6 (Oct 9 – 13)** | **Study Break - No Classes** | | |
| Week 7 (Oct 16 – 20) | Lecture 11 | LinkedLists in Java | Lab 5 |
| | Lecture 12 | Circular and Doubly LinkedList | |
| Week 8 (Oct 23 – 27) | Lecture 13 | Recursion | Lab 6 |
| | Lecture 14 | Divide and Conquer | |
| Week 9 (Oct 30 – Nov 03) | Lecture 15 | Sorting I | Lab 7 |
| | Lecture 16 | Sorting II | |
| Week 10 (Nov 06 – 10) | Lecture 17 | Trees / Binary Search Trees | Lab 8 |
| | Lecture 18 | Tree Traversals | |
| Week 11 (Nov 13 – 17) | Lecture 19 | AVL trees | Lab 9 |
| | Lecture 20 | Splay trees | |
| Week 12 (Nov 20 – 24) | Lecture 21 | Maps and Hashing | Lab 10 |
| | Lecture 22 | Graphs | |
| Week 13 (Nov 27 – Dec 01) | Lecture 23 | Revision | |
| **Final Exam Period (Dec 06 - 16)** | | **Lecture 1 - 22 (emphasis on Lecture 11 - 22)** | **Final Exam** |

## Assessments

| Component | Weight |
|---|---|
| Labs | 40% |
| Mid Term Exam | 25% |
| Final Exam | 35% |

## Student Expectations:

Below are some of the expectations from the students in this course:

- Students are expected to attend weekly lectures.
- This is a practical course and hence students are expected to attend Labs to practice the concepts studied in the class.
- It is expected from students to submit all the assessments on time to avoid losing marks for late submissions.
- Instructor has designed the course in a way that it gives students a lot of hands-on on various concepts throughout the course; it is expected from students to complete those exercises to have a better grasp of the concepts.
- Students are expected to ask questions during the lecture, in Labs and are welcome to visit the Instructor and TAs in their office hours.
- Students are expected to be respectful to their Instructor, TAs and fellow students.
- Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences.