Course Outline – Fall 2022
COSC 1047O: Introduction to Computer Science II
Department of Computer Science and Technology
Algoma University

Instructor:

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Course Designer:

Name: Dr. George Townsend

Calendar Description:

This course takes a software engineering approach to programming in the large with particular emphasis on modularity, abstract data types, programme specification, testing, documentation and maintenance. Students will develop and document software with reusable software libraries.

Required Text:

Y. Daniel Liang, "Introduction to Java Programming", Brief Version, 11th Edition, Pearson, 2018   ISBN: 978-0-13-461103-7

Course Objectives:

This course is divided into 4 modules. The objectives of each module are as follows:

Module 1:

The student should be able to demonstrate their ability to write programs which appropriately incorporate objects into their solution. The student should be able to describe and explain the concepts of *inheritance* and *polymorphism* and include the use of these concepts in their programs.

Module 2:

The student should be able to demonstrate the appropriate use of error and exception handling in their programs and should be able to perform text I/O. The student should be able to incorporate abstract classes in their programs.

Module 3:

The students should be able to demonstrate their familiarity with GUI basics by programming applications that use a GUI interface. The student should be able to identify events and be able to use event driven programming to process them.

Module 4:

The student should be able to write applications which use standard GUI components. The student should be able to write programs that use binary I/O to and from files and should understand how to use random access files.

<u>Course Evaluation:</u>

Homework Assignments (5 x 4.2%)	**21%**
Labs (7 x 3%)	**21%**
Midterm Exam	**18%**
Final Exam	**40%**
	100%