Course Code	Course Title
COMP 3021	**Java Programming**

Course Description

Introduction to Java programming. Fundamentals include language syntax, object-oriented programming, inheritance, polymorphism, exception handling, multithreading and lambdas. Standard libraries for input/output, graphics programming, built-in data structures. Programming for events, generics and higher-order functions. Prerequisite(s): COMP 2012 OR COMP 2012H. Exclusion(s): ISOM 3320

List of Topics

Classes and Objects
Java Development Tools (IntelliJ)
String Processing and Text Input/Output
Inheritance and Polymorphism
Interfaces and Inner Classes
Unit Testing
Exceptions
Generic Programming
Lambdas and functional programming
Event Handling and GUI programming
Multithreading

Textbooks

N/A

Reference books

- Introduction to Java Programming and Data Structures: Comprehensive Version, Y Daniel Liang. Pearson, c2019, 11th Edition.

- Introduction to Java Programming and Data Structures: Comprehensive Version, Y Daniel Liang. Pearson, c2019, 11th Edition.

- Java SE 8 for the Really Impatient, Cay S. Horstmann, Addison-Wesley Professional, c2014, 1st Edition.

- Java 8 in Action: Lambdas, streams, and functional-style programming, Raoul-Gabriel Urma, Mario Fusco and Alan Mycroft, Manning Publications, c2014, 1st Edition.

- Core Java: Volume I - Fundamentals, Cay S. Horstmann, Prentice Hall, c2019, 11th Edition.

- Core Java: Volume II - Advanced Features, Cay S. Horstmann, Prentice Hall, c2019, 11th Edition.

Grading Scheme

In-class Quizzes and Participation	8%
Laboratory exercises	8%
Course assignments	45%
Examination	39%
Total	100%

Course Intended Learning Outcomes

1. An ability to develop programs in Java.
2. An ability to use Java packages in programming.
3. An ability to apply tools and practices for Java programming.

Assessment Rubrics
N/A