

CS 1331 Introduction to Object Oriented Programming

1 Course Objectives

Students will:

- Understand object-oriented programming principles and apply them in the construction of Java programs.
- Demonstrate proficiency in writing medium sized (1-10 source file) Java programs.
- Create, select, and use appropriate basic algorithms and data structures in Java programs.
- Understand and apply event-driven programming principles in graphical user interface (GUI) programs.

2 Prerequisites

At least one of:

- Undergraduate Semester level CS 1301 Minimum Grade of C
- Undergraduate Semester level CS 1315 Minimum Grade of C
- Undergraduate Semester level CS 1321 Minimum Grade of C
- Undergraduate Semester level CS 1371 Minimum Grade of C

3 Required Software and Textbook

- Software: Java 7 SDK, available from <http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html>
- Textbook: on the level of Absolute Java, 5th Edition by Savitch and Mock, ISBN-10: 0-13-283031-0, ISBN-13: 978-0-13-283031-7

4 Workload

Weekly programming assignments, 3 exams, and a final exam.

5 Typical Course Topics

- The Java Platform
- Values and Variables
- Console and File I/O
- Structured programming
- Arrays
- Data abstraction
- Inheritance and polymorphism
- Exception handling
- Recursion
- Graphical user interface (GUI) programming
- Basic data structures such as lists, stacks and queues