

Community College of Allegheny County
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CREDIT COURSE SYLLABUS

COURSE NUMBER: CIT-130

COURSE TITLE: Object-Oriented Programming 1: Java

CREDITS: 4

HOURS: **Lecture:** 4 **Lab:**
 Clinical: **Studio:** **Practicum:**

PREREQUISITES: CIT-111 or with instructor's permission

COREQUISITES:

CATALOG COURSE DESCRIPTION:

This course uses the skills gained in CIT-111 and expands on the concepts of the software development process, data representation and storage, program control structures, objects and classes. Additional topics include event handling, arrays and window based graphical user interfaces (GUIs).

LEARNING OUTCOMES:

Upon successful completion of the course, the student will:

1. Create Java programs using object-oriented design and program structure.
2. Apply Java language elements to create Swing GUI components with event handling.
3. Apply Java language elements to use string processing techniques in a program.
4. Apply Java language elements to create programs with single dimension arrays of primitives and objects.
5. Apply Java language elements to create programs utilizing inheritance.
6. Use exception handling in programs to create user friendly applications.

LISTED TOPICS:

1. Review of data types, Boolean expressions and control structures
2. Switch statements nested control structures and enhanced loops
3. Review of writing classes and their constructors
4. Scope, overloading and overriding
5. Swing components and event handling within window applications
6. Integrated development environment (IDE) testing and debugging techniques
7. Exception handling
8. String processing techniques
9. Abstract classes, class hierarchies, inheritance and polymorphisms
10. Arrays of primitives and class objects

REFERENCE, RESOURCE, OR LEARNING MATERIAL TO BE USED BY STUDENT:

Current textbook, current version of software, multimedia, internet and Web server account.

Approved by the President on: Dr. Alex Johnson 12/19/2012

Start Year/Term: _____