Virginia Western Community College
ITP120
Java Programming I

Prerequisites
ITP 100 or instructor's permission

Course Description
Entails instruction in fundamentals of object-oriented programming using Java. Emphasizes program construction, algorithm development, coding, debugging, and documentation of console and graphical user interface applications.

Semester Credits: 4 Lecture Hours: 4 Lab/Clinical/Internship Hours: 0

Required Materials

Textbook:
Java, How to Program, 11th edition, Paul and Harvey Deitel, Pearson Publishing.There are three versions. ISBN with eBook 978-0134752129 ISBN with loose leaf printed text 978-0134800301 ISBN with printed version of text 978-0134800271 Make certain it is the code for Deitel 11th Java Early Objects.

Other Required Materials:
MyProgrammingLab (comes with new textbook). Can purchase just the access code for the MyProgrammingLab with ISBN 978-0134752105.
Eclipse (latest version) supplied in class

Course Outcomes

At the completion of this course, the student should be able to:

- Have an introduction to computers, programs, and Java
- Understanding the fundamentals of input, processing, output
- Understand how to use both console and dialog box input and output
- Be able to master the concepts of Java constructs including looping and selections
- Understand the concept of static entities
- Be able to modularize code with methods
- Understand how to utilize one dimensional arrays
- Understand how to apply Java objects and classes to solve programs
- Be able to write code with classes and associations
- Understand and utilize the concepts of inheritance and polymorphism

- Understand how to use flat files
- Be able to write code that catches, handles, and throws exceptions
- Understand the concepts of abstract classes
- Be able to implement interfaces to help with generic solutions
- Be able to utilize ArrayLists for collections

Topical Description

Module 1: Introduction to Java, Classes, and Objects (2 weeks)
Module 2: Objects, classes, and decisions (2 weeks)
Module 3: More constructs, loops (2 weeks)
Module 4: More Classes and Object Oriented Design. Lots of methods (2 weeks)
Module 5: Arrays, ArrayLists, and other Collections (2 weeks)
Module 6: Advanced Inheritance Topics and Interfaces (2 weeks)
Module 7: I/O, Exceptions, and JavaDocs (2 weeks)

Notes to Instructors

1. Each module is two weeks long and requires both a quiz and a laboratory assignment submitted through Blackboard
2. A midterm exam is required.
3. A semester long project is required