ENTD380

Course Summary

Course : ENTD380 **Title :** Introduction to Object Oriented Programming with Java
Length of Course : 8
Prerequisites : ENTD200 **Credit Hours :** 3

Description

Course Description: This course is an introduction to the concepts and principles of Object-Oriented Programming (OOP) using Java programming language. Writing programs for mobile devices such as smartphones and tablets is in growing demand. Java is one of the most popular programming languages used to address this need, especially for requirements involving several computing devices. The course addresses Java fundamentals, branching and loop control structures, subroutines, objects and classes, Graphical User Interface (GUI) program, arrays, recursion and linked data structures, and other Java related concepts and principles. This course solidifies a theoretical overview of designing and developing applications using Java programming language. The course will also provide both conceptual and scenario based exercises, thus enabling students to experience the maximum amount of comprehension and retention of material covered. This software is not provided by the course material grant and must be purchased/provided by the student. Prerequisite: ENTD200

Course Scope:

This course is divided into 8 weeks and is organized to give students the concepts and principles of Object-Oriented Programming (OOP) using Java programming language. Students will be challenged to apply basic software skills. The course includes textbook readings, assignments, graded forums and final project.

Objectives

After successfully completing this course, you will be able to

- Explain the fundamentals of Java programming
- Apply branch and loop control structures in Java programming
- Apply subroutines in Java programming
- Demonstrate use of objects and classes in Java programming
- Create a graphical user interface (GUI) program using Java programming
- Demonstrate use of arrays in Java programming
- Summarize using advanced Java programming techniques, recursion and linked data structures, and some of their applications
- Build an application using the process for designing and developing Java programming

Outline

Week 1: Overview, Java Names and Java Things

Learning Outcomes

Explain the fundamentals of Java programming

Required Readings

- Chapter 1 The Mental Landscape 1
- Chapter 2 Names and Things

Assignments

- Week 1 Introduction Forum
- Week 1 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 2: Apply Branch and Loop Control Structures

Learning Outcomes

Apply branch and loop control structures in Java programming.

Required Readings

Chapter 3 Control

Assignments

- Week 2 Forum
- Week 2 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 3: Apply Subroutines

Learning Outcomes

Apply subroutines in Java programming

Required Readings

Chapter 4 Subroutines

Assignments

- Week 3 Forum

- Week 3 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 4: Objects and Classes

Learning Outcomes

Demonstrate use of objects and classes in Java programming

Required Readings

Chapter 5 Objects and Classes

Assignments

- Week 4 Forum
- Week 4 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 5: Java GUI

Learning Outcomes

Create a graphical user interface (GUI) program using Java programming.

Required Readings

- Chapter 6 Introduction to GUI Programming
- Chapter 13 Advanced GUI Programming

Assignments

- Week 5 Forum
- Week 5 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 6: Java Array

Learning Outcomes

Demonstrate use of arrays in Java programming

Required Readings

- Chapter 7 Arrays and ArrayLists

- Chapter 8 Correctness, Robustness, Efficiency

Assignments

- Week 6 Forum
- Week 6 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 7: Advanced Java Programming

Learning Outcomes

Summarize using advanced Java programming techniques, recursion and linked data structures, and some of their applications

Required Readings

- Chapter 9 Linked Data Structures and Recursion
- Chapter 10 Generic Programming and Collection Classes

Assignments

- Week 7 Forum
- Week 7 Assignment

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Week 8: Build Application

Learning Outcomes

Build an application using the process for designing and developing Java programming.

Required Readings

- Chapter 11 Streams, Files, and Networking
- Chapter 12 Threads and Multiprocessing

Assignments

- Week 8 Forum
- Final Project

Recommended Optional Reading

Textbook Companion Site (Please use this site to download the code examples in the textbook) - download other links: **http://math.hws.edu/javanotes/index.htm**

Evaluation

Grading:

Name	Grade %
Forums	40.00 %
Week 1 Forum	5.00 %
Week 2 Forum	5.00 %
Week 3 Forum	5.00 %
Week 4 Forum	5.00 %
Week 5 Forum	5.00 %
Week 6 Forum	5.00 %
Week 7 Forum	5.00 %
Week 8 Forum	5.00 %
Final Project	25.00 %
Final Project	25.00 %
Assignments	35.00 %
Week 1 Assignment	5.00 %
Week 2 Assignment	5.00 %
Week 3 Assignment	5.00 %
Week 4 Assignment	5.00 %
Week 5 Assignment	5.00 %
Week 6 Assignment	5.00 %
Week 7 Assignment	5.00 %

Materials

Book Title: Intro. to Programming Using Java Volume 6.0 - available online

Author: Eck

Publication Info: Eck

ISBN: N/A

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- “Substantive” means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

Identity Verification & Live Proctoring

- Faculty may require students to provide proof of identity when submitting assignments or completing assessments in this course. Verification may be in the form of a photograph and/or video of the student’s face together with a valid photo ID, depending on the assignment format.
- Faculty may require live proctoring when completing assessments in this course. Proctoring may

include identity verification and continuous monitoring of the student by webcam and microphone during testing.

University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.