

PERALTA COMMUNITY COLLEGE DISTRICT COURSE OUTLINE

COLLEGE:	Laney College	STATE APPROVAL DATE:	09/26/2010
ORIGINATOR:	Patrick McDermott	STATE CONTROL NUMBER:	CCC000364201
		BOARD OF TRUSTEES APPROVAL DATE:	06/14/2016
		CURRICULUM COMMITTEE APPROVAL DATE:	03/18/2016
		CURRENT EFFECTIVE DATE:	

DIVISION/DEPARTMENT: Laney College

1. REQUESTED CREDIT CLASSIFICATION:

Credit - Degree Applicable
Course is not a basic skills course.
Program Applicable

2. DEPT/COURSE NO:

CIS 036A

3. COURSE TITLE:

Java Programming Language I

4. COURSE: Laney Course

Updating

TOP NO. 0707.10

5. UNITS: 4.00

HRS/WK LEC: 3.00 Total: 52.50

HRS/WK LAB: 3.00 Total: 52.50

HRS/WK TBA:

6. NO. OF TIMES OFFERED AS SELETED TOPIC: AVERAGE ENROLLMENT:

7. JUSTIFICATION FOR COURSE:

Java is a standard language for developing architecture-neutral platform independent applications that can operate on appliances, workstations and servers and applets that are run from a browser over the Internet. It has become the required programming language in CIS curricula among the nation's universities and colleges. Java programming skills are in great demand in the industry. Course is transferable to the CSU and UC systems and meets AA/AS area 4c requirements; it is required for the Internet Programming certificate.

8. COURSE/CATALOG DESCRIPTION

Introduction to object-oriented program design: Overview of the Java programming language including developing applets for web pages and stand-alone applications.

9. OTHER CATALOG INFORMATION

a. Modular: No If yes, how many modules:

b. Open entry/open exit: No

c. Grading Policy: Both Letter Grade or Pass/No Pass

d. Eligible for credit by Exam: No

e. Repeatable according to state guidelines: No

f. Required for degree/certificate (specify):

Existing - Internet Programming certificate; AA/AS area 4c requirements

g. Meets GE/Transfer requirements (specify):

Acceptable for credit: CSU, UC

h. C-ID Number: Expiration Date:

i. Are there prerequisites/corequisites/recommended preparation for this course? Yes

Date of last prereq/coreq validation: 03/18/2016

- 10. LIST STUDENT PERFORMANCE OBJECTIVES (EXIT SKILLS):** (Objectives must define the exit skills required of students and include criteria identified in Items 12, 14, and 15 - critical thinking, essay writing, problem solving, written/verbal communications, computational skills, working with others, workplace needs, SCANS competencies, all aspects of the industry, etc.)(See SCANS/All Aspects of Industry Worksheet.)

Students will be able to:

1. Describe the structure of the Internet and be able to use a graphical Web browser.
2. Write statements using correct syntax.
3. Explain the concept of classes.
4. Create objects, using references, arrays and inheritance
5. Combine classes into packages and handle exceptions.
6. Create applets using Java and HTML (hypertext markup language).
7. Create applets to handle mouse, keyboard and other events.
8. Use basic GUI (graphical user interface) components.
9. Create Web pages using Java programming.

- 11A. COURSE CONTENT:** List major topics to be covered. This section must be more than listing chapter headings from a textbook. Outline the course content, including essential topics, major subdivisions, and supporting details. It should include enough information so that a faculty member from any institution will have a clear understanding of the material taught in the course and the approximate length of time devoted to each. There should be congruence among the catalog description, lecture and/or lab content, student performance objectives, and the student learning outcomes. List percent of time spent on each topic; ensure percentages total 100%.

LECTURE CONTENT:

1. Overview of object-oriented programming and Java language syntax (5%)
2. Write statements using correct syntax: Java types, operators, and control structures (10%)
3. Arrays (5%)
4. Methods/functions, recursion, and method overloading (15%)
5. Classes, objects and encapsulation (10%)
6. Inheritance and polymorphism (15%)
7. Interfaces (10%)
8. Input, output, and files (5%)
9. Introduction to data structures including stacks, queues, and trees (15%)
10. Graphical user interfaces and event handling (10%)

Total 100%

11B. LAB CONTENT:

1. Overview of object-oriented programming and Java language syntax (5%)
2. Java types, operators, and control structures (10%)
3. Arrays (5%)
4. Methods/functions, recursion, and method overloading (15%)
5. Classes, objects and encapsulation (10%)
6. Inheritance and polymorphism (15%)
7. Interfaces (10%)
8. Input, output, and files (5%)
9. Introduction to data structures including stacks, queues, and trees (15%)
10. Graphical user interfaces and event handling (10%)

Total 100%

12. METHODS OF INSTRUCTION (List methods used to present course content.)

1. Activity
2. Discussion
3. Lab
4. Lecture
5. Observation and Demonstration
6. Projects
7. Other (Specify)

Other Methods:

Case studies and student presentations may be used

13. ASSIGNMENTS: 6.00 hours/week (List all assignments, including library assignments. Requires two (2) hours of independent work outside of class for each unit/weekly lecture hour. Outside assignments are not required for lab-only courses, although they can be given.)

Out-of-class Assignments:

1. Assigned text readings.
2. Prepare and review lab assignments/programming exercises prior to doing them on the computer.
3. Write programs using Java.
4. Optional: Case study reports; preparation for class presentations

ASSIGNMENTS ARE: (See definition of college level):

Primarily College Level

14. STUDENT ASSESSMENT: (Grades are based on):

ESSAY (Includes "blue book" exams and any written assignment of sufficient length and complexity to require students to select and organize ideas, to explain and support the ideas, and to demonstrate critical thinking skills.)

COMPUTATION SKILLS

NON-COMPUTATIONAL PROBLEM SOLVING (Critical thinking should be demonstrated by solving unfamiliar problems via various strategies.)

SKILL DEMONSTRATION

MULTIPLE CHOICE

OTHER (Describe):

Lab and programming assignments/exercises. Optional: class presentations, case study reports.

15. TEXTS, READINGS, AND MATERIALS

A. Textbooks:

Savitch, Walter & Kenrick Mock. 2015. *Absolute Java* 6th. Addison-Wesley

Schildt, Herbert & Dale Skrien. 2014. *Java Programming: A Beginner's Guide* 6th. McGraw-Hill

NetBeans (7.2.1) [Software]. NetBeans & Oracle. Available as a free download: <http://netbeans.org/>
With JDK: <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

*Date is required: Transfer institutions require current publication date(s) within 5 years of outline addition/update.

B. Additional Resources:

Library/LRC Materials and Services:

The instructor, in consultation with a librarian, has reviewed the materials and services of the College Library/LRC in the subject areas related to the proposed new course

Are print materials adequate? Yes

Are nonprint materials adequate? Yes

Are electronic/online resources available? Yes

Are services adequate? Yes

Specific materials and/or services needed have been identified and discussed. Librarian comments: provide librarian with list of recent, recommended supplementary(non-textbook) titles to support the curriculum.

C. Readings listed in A and B above are: (See definition of college level):

Primarily college level

16. DESIGNATE OCCUPATIONAL CODE:

C - Occupational

17. LEVEL BELOW TRANSFER:

Y = Not Applicable

SUPPLEMENTAL PAGE

Use only if additional space is needed. (Type the item number which is to be continued, followed by "continued."

Show the page number in the blank at the bottom of the page. If the item being continued is on page 2 of the outline, the first supplemental page will be "2a." If additional supplemental pages are required for page 2, they are to be numbered as 2b, 2c, etc.)

1a. Prerequisites/Corequisites/Recommended Preparation:

RECOMMENDED PREPARATION:

CIS 006: Introduction to Computer Programming

or

CIS 061: Structure and Interpretation of Computer Programs

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