

PERALTA COMMUNITY COLLEGE DISTRICT COURSE OUTLINE

COLLEGE:	Laney College	STATE APPROVAL DATE:	08/14/2015
ORIGINATOR:	Patrick McDermott	STATE CONTROL NUMBER:	CCC000567159
		BOARD OF TRUSTEES APPROVAL DATE:	06/14/2016
		CURRICULUM COMMITTEE APPROVAL DATE:	04/01/2016
		CURRENT EFFECTIVE DATE:	08/22/2016

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 081

3. COURSE TITLE:

Systems Analysis with UML

4. COURSE: Laney Course Updating

TOP NO. 0707.30

5. UNITS: 3.00

HRS/WK LEC: 3.00 Total: 52.50

HRS/WK LAB:

HRS/WK TBA:

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

7. JUSTIFICATION FOR COURSE:

This course is an elective for the CIS/Computer Programming, A.S. Degree and programming Certificates of Achievement. The purpose of this course is to teach software development processes, including the use of Unified Modeling Language in the various phases of software development.

8. COURSE/CATALOG DESCRIPTION

Principles of systems analysis: Techniques of analysis and design emphasizing UML in software requirements analysis, and the design and documentation phase of software development; utilizing life cycle of systems design, iterative, and waterfall development processes, object-oriented analysis and design.

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):
 Computer Systems Analysis
- g. Meets GE/Transfer requirements (specify):
 Acceptable for credit: CSU. AA/AS area 4c.
- h. C-ID Number: Expiration Date:

- i. Are there prerequisites/corequisites/recommended preparation for this course? Yes
 Date of last prereq/coreq validation: 04/01/2016

- 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 purpose of systems analysis and design, life cycle of systems design, iterative, and waterfall development processes, object oriented analysis and design.
2. Identify client requirements and interpret and evaluate requirements for completeness, relevance, accuracy, and consistency.
3. Create a solution from the problem definition, subdivide a system by partitioning the system according to functions, and organize the system into hierarchies.
4. Develop high-level systems and functional specifications, and perform data flow, event analysis and object modeling.
5. Design a system using UML in requirements, analysis, design, and documentation phases of software.

- 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. Introduction to Systems Analysis, Design Process, and Unified Modeling Process (10%)
2. The importance of planning, analysis, and requirements definition. Structured versus traditional versus O/O development. Productivity and the structured approach. The project and systems life cycle. Iterative and waterfall processes, predictive and adaptive planning, agile processes, rational unified process (10%)
3. Different types, levels and perspectives of requirements. Functional and non-functional requirements. The requirements workflow and use case modeling (20%)
4. Defining systems scope, objectives and identifying functions. The analysis of workflow, classes and objects, relationships, inheritance and polymorphism, analysis packages, and activity diagrams (25%)
5. The design of work flow, designing classes, interfaces and subsystems, state machines (25%)
6. Implementation of workflow, components, deployment (10%)

11B. LAB CONTENT:

No separate Lab

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

1. Lecture
2. Projects
3. Other (Specify)
4. Activity
5. Discussion
6. Distance Education
7. Multimedia Content
8. Observation and Demonstration
9. Threaded Discussions

Other Methods:

Computer Modeling assignments Team Analysis projects

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:

PREREQUISITE(S):

CIS 025: Object Oriented Programming Using C++

or

CIS 036A: Java Programming Language I

Subject course and pre/corequisite is: Sequential

or

CIS 062: Introduction to Systems Analysis and Design

Generated on: 6/15/2016 6:31:19 PM