San Bernardino Valley College
Curriculum Approved:
Last Updated: October 20, 2005

I. CATALOG DESCRIPTION

A. Department Information:

Division:	Business & Information Technology
Department:	Computer Information Technology
Course ID:	CIT 210
Course Title:	Systems Analysis and Design
Units:	3
Lecture:	3 hours
Laboratory:	None
Prerequisite:	CIT 101

B. Catalog and Schedule Description:
Introduction to systems analysis and design using traditional development (SDLC) and current techniques, such as client server and object-oriented development, GUI, and electronic data interchange. Emphasis on the role of the analyst, project management techniques, communication skills, economic analysis tools, and computer-assisted system engineering options. (Formerly MIS 210)

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES FOR STUDENTS:

Upon successful completion of the course, the student should be able to:

A. examine the investigation, analysis, design, development, and implementation of an application within an ongoing system.
B. develop a basic understanding of information systems, general system solution, and the discipline of systems analysis in relation to the information system lifecycle.
C. define the role of a Systems Analyst, and demonstrate the use of design and feasibility study tools.
D. demonstrate the correct procedures and production of documentation required for a total conversion project.
E. weigh the importance of project management in relation to total system analysis.

IV. CONTENT

A. The Role of System Analyst
   1. The Analyst as a Project Manager
   2. Approaches to System Development
B. Defining the Organizational Style
   1. Management Hierarchical Charts
   2. Identifying the Scope of the Organization
C. Feasibility Tools
   1. Calculating Net Present Value
   2. Payback Period
   3. Return on Investment
D. Investigating System Requirements
   1. Interviewing
   2. Questionnaires
   3. Observations
E. Analysis Tools
   1. Process Modeling
   2. Data Modeling

3. Object Modeling

F. Prototyping
   1. System Modeling
   2. 4GL Programming
   3. User Responsibilities
   4. Report and Query Design

G. Beta Testing and Evaluation
   1. Developing Test Data
   2. Evaluating Test Results
   3. Evaluating Alternative Methods

H. Preparing System Proposal
   1. Design Tools
   2. Documentation
   3. Identifying the Scope of the Project

I. System Design Tasks
   1. Designing Databases
   2. Designing User Interface
   3. Designing System Interface, Controls, and Security

J. Implementation and Support
   1. Rapid Application Development
   2. Packaged Software and Enterprise Resource Planning
   3. Making the System Operational
   4. Beta Testing and User Training
   5. Maintenance and Review

V. METHODS OF INSTRUCTION

A. Lecture
B. Demonstration
C. Directed discussion and discovery
D. Writing assignments
E. Data-Show computer display
F. One-on-One instruction
G. Simulation exercises

VI. TYPICAL ASSIGNMENTS

A. Case study of current systems
   1. Developing interview questions: Select a system that you have used such as a class registration system at your school, a bank account system, an airline reservation system, etc. If you were developing user requirements for that system, develop a questionnaire (minimum ten questions) that will help you develop the system performance requirements from a user perspective.

B. Problem solving involving analysis of an existing system
   1. Design alternative solutions to a given problem: Based on the questionnaire completed, provide three alternative user interface designs.

C. Problem resolution
   1. Finding problems in a given system: Develop a scenario for a quasi-real situation and develop a solution for the scenario. You have been contacted by a college to develop an online student registration system.
      a. Develop a list of stake holders.
      b. Identify positions of the stake holders' groups and develop requirements.
      c. Develop a list of system performance requirements.

VII. EVALUATION(S):

A. Methods of Evaluation
   1. Examinations and objective quizzes
      a. What is the purpose of capacity planning?

2. Case studies
    a. Based on the case study assigned by the instructor, develop user requirements for that system, develop a questionnaire (minimum ten questions) that will help you develop the system performance requirements from a user perspective.
3. Class Participation
4. Project

B. Frequency of Evaluation
1. Minimum five (5) quizzes
2. Weekly practice exercises
3. Three exams
4. One (1) final exam

VIII. TYPICAL TEXT(S):

Harris, David. Systems Analysis and Design for the Small Enterprise, 3rd ed. Cincinnati, OH: Thompson Learning, 2003.

Kendall, Julie E. System Analysis and Design, 5th ed. Upper Saddle River, NJ: Prentice-Hall, 2002.

Satzinger, John W.and Jackson, Robert and Burd, Stephen D. System Analysis and Design in a Changing World, 2nd ed. Cincinnati, OH: Thompson Learning, 2002.

IX. OTHER SUPPLIES REQUIRED OF STUDENTS:

Zip Disk.