

Common Course Outline
CINS 231
Applied Systems Analysis and Design
4 Semester Hours
The Community College of Baltimore County

Description

Applied Systems Analysis and Design

Discusses systems analysis and design that emphasizes the Systems Life Cycle Concept; includes contemporary theories of planning, organizations, communications, investigation, control and the skills and techniques necessary for design and implementation of a software system.

4 credits: 4 lecture hours (this course is delivered in a combination lecture and hands-on format).

Prerequisite: CINS 134 or CINS 234 and at least one programming course (CINS 111 does not satisfy this requirement) or consent of the Program Director

Overall Course Objectives

Upon completion of this course, you will be able to:

1. Define the phases and tasks of the system development life cycle (SDLC)
2. Describe the responsibilities of a systems analyst and identify to whom the systems analyst is responsible.
3. Describe the modern approaches to systems analysis and design
4. Contrast the traditional, structured, and object-oriented analysis/design methodologies
5. Describe the makeup of systems project teams, identifying the role and contribution of users, systems analysts, programmers, and technical support personnel.
6. Identify and explain differences and relationships of logical and physical models of computer information systems.
7. Identify and model the data and processes of a business.
8. Define and employ the various information gathering techniques to document the business requirements
9. Construct and understand the functional description and documents of a system
10. Demonstrate a fundamental knowledge of the skills needed to construct the system's process model and the data model combining data flow diagrams and ER diagrams
11. Apply good teamwork skills during the generation of a SAD project.

Major Topics

- I. Introduction to Information Systems
 - A. Types of information systems
 - B. Organizational levels
 - C. Systems development life cycle

- II. Preliminary Investigation
 - A. Preliminary investigation objectives
 - B. Preliminary investigation steps
- III. Determining Requirements
 - A. Interviews
 - A. Observation
 - B. Sampling
 - C. Questionnaires
- IV. Analyzing Requirements
 - A. Data flow diagrams
 - B. Data Dictionary
- V. Evaluating Alternatives and Strategies
 - A. Software alternatives
 - B. Hardware alternatives
 - C. Systems Requirements Document and Management Presentation
- VI. Output Design
- VII. Input Design
- VIII. Database Design
 - A. E-R Diagrams
 - B. Relational Design and Normalization
 - C. OOSAD
- IX. Systems Architecture
 - A. Application Development
 - B. Coding
 - C. Testing
 - D. Documentation
- X. Installation and Evaluation
 - a. Training
 - b. System changeover
- XI. Systems Operation and Support
- XII. Project Management Tools
- XIII. Feasibility and Cost Analysis

Course Requirements

Grading procedures will be determined by the faculty member, will be provided the first week of class, and will include:

1. Minimum of 1 group project (to include both written and oral presentations)
2. Minimum of 1 individual project
3. Minimum of 2 tests

Other Course Information

This course is required in CIS: Database and in CIS: Programming.
This course is taught in a computerized environment.