Common Course Outline
CSIT 241
Applied Systems Analysis and Design
4 Credits

The Community College of Baltimore County

Description

CSIT 241 – 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

Prerequisite: CSIT 111

Overall Course Objectives

Upon completion of this course students 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; and
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
    B. Observation
    C. Sampling
    D. 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. Object-Oriented Systems Analysis and Design (OOSAD)
IX. Systems Architecture
    A. Application Development
    B. Coding
    C. Testing Consistency in capitalization; some are all capitalized and some not
    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

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is an elective in the Information Technology program. This course is taught in a computerized environment.