

**IS 385 SYSTEMS ANALYSIS AND DESIGN
STANDARD COURSE OUTLINE**

I. General Information

Course Number:	IS 385
Course Title:	Systems Analysis and Design
Units:	3
Prerequisite:	IS 300
Course Coordinator:	Asela Thomason
SCO prepared by:	Asela Thomason
Date prepared/revised:	October 7, 2012

II. Catalog Description

Introduction to current and emerging practices, concepts and methods of systems analysis and design. Development process models, requirements analysis and system modeling, conceptual and physical design, systems implementation and maintenance, project management and teamwork, roles and responsibilities of systems analysts.

Letter grade only (A-F).

III. Curriculum Justification(s)

Systems Analysis and Design is a major component Information Systems. The central objective of this course is to expose students to the methodology of developing successful information systems. The student will look at the major stakeholders in the process of developing information systems. Emphasis is placed on system owners, system users, project managers, and system developers. The course covers fundamentals of systems analysis and design. As part of the course, students will learn skills, methodologies, techniques, tools and perspectives essential for system's analysts and designers to successfully develop information systems.

The focus of the course will be on the following topics:

- The importance of adopting a structured methodology for system development
- Project planning and management for an effective system development process
- Feasibility analysis, cost justification and risk management
- Requirement gathering

- Systems analysis and modeling
- Systems design and modeling
- Systems Implementation and support

Upon completion, the student will meet the following three specific CBA learning goals:

Learning Goal #1 – Critical Thinking Learning Goal #3 – Team and Interpersonal Skills Learning Goal #6 – Quantitative and Technical Skills
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IV. Course Objectives

Students who pass IS 385 must demonstrate ...

- . You will upon completion of this course have learned the following:
 - Describe the major alternatives methodologies used in development information systems and the considerations involved in choosing which methodology to use.
 - Produce the necessary systems documentation at each point in the analysis and design of an information system.
 - Analyze a business need for information and to develop an appropriate strategy to solve the problem and provide the required information service.
 - Prepare and use various information gathering technique for eliciting user information requirements and systems expectation.
 - Construct and interpret a variety of system description documents and techniques such as Domain of change, Physical and logical Data flow diagrams, Entity Relationship diagrams, Structure charts, screen form and report layouts, etc.
 - Communicate requirements effectively both in written and oral formats.
 - Manage an Information Systems Project.

V. Outline of Subject Matter

The Systems Development Environment

- Types of Information Systems and systems development
- Methodologies-SDLC, prototyping, Case tools, RAD, Agile, etc.
- Developing Information systems and Systems Development Life cycle

Origins of software

- Systems Acquisition (Outsourcing, Package software, in-house development, Application Service provider, Open Source, Enterprise solution Software)

Managing the Information system Project

- Managing the Information system Project
- Project plans and Schedules
- Using project management software

Planning

- Identifying and Selecting systems development projects
- Initiating and Planning the Systems Development Projects
 - Project Feasibility-Technical, Economic, Operational, Contractual, etc.
 - Base line project plan

Planning-Deliverables

- Project Definition-Includes Domains of Change (Scope)

Analysis

- Determining systems Requirements
- Structuring system Process –Process Modeling, Data Flow diagrams
- Structuring systems logic- Modeling Logic with structure English, decision tables
- Structuring System Data Requirements-conceptual data modeling, ERD Deliverables

Design

- Designing databases
- Designing forms and Reports
- Designing interfaces and dialogues
- Designing Graphical interfaces
- Finalizing the Design Specifications Deliverables

Special Topics

- Designing distributed and internet systems

Systems implementation and maintenance

- Project close-down Deliverables

VI. Methods of Instruction

The preferred method for this course is lecture based with some lab set aside for implementing the Data and Process modeling tools. The course should include class discussion, group work, and student capstone project and presentations. Instructors are required to assign a **course project** that incorporates the entire systems development life cycle. In addition homework assignments should be assigned to reinforce Process and Data modeling. Students should be encouraged to seek outside of the classroom fieldwork for their data gathering and requirements gathering of their final project.

The following two textbooks cover the subject area well, but instructor may select a similar textbook.

Required Texts

Modern Systems Analysis and Design – Sixth Edition

Jeffrey A. Hoffer, Joey f. George and Joseph S. Valacich

Published by: Prentice Hall

Systems Analysis and Design

Shelly and Cashman

Published by: Thomson/Course Technology.

VII. Instructional Policies Requirements

A. Assessment Criteria

Homework and Case

There will be a team Case in which the team will develop and present a Project Definition with preliminary data model and Process Model. In addition there will be an individual homework assignments assigned during the quarter. The number of assignments is up to each instructor, but should not be less than two.

Midterm and Final

There will be preferably two midterms and a final exam (required). These exams may be in any format; multiple choice, problems, essays or any combination.

Class Project

The class will work on a software development project in small teams. All class members will be assigned to a team. Working as part of a development team is part of the learning experience.

Each team will complete the Design/Analysis & Prototype of a single-user application using Access for windows as your development tool and/or web design. The Application will require all steps of the systems development life cycle to be incorporated into the final project for this course.

B. Required Statement

In compliance with university policy: Final grades will be based on at least three, and preferably four or more, demonstrations of competence. In no case will the grade on any class tests count for more than one-third of the course grade.

C. Attendance, Withdrawal, Late Assignments

Students are expected to attend courses and turn in assignments on time. Specific attendance and late assignment policies are up to each individual instructor's discretion. The withdrawal policy is the same as that of the university.

D. Disabilities

Students with disabilities are responsible for notifying their instructor as early as possible of their needs for an accommodation of a verified disability. A student with a disability is urged to consult with Disabled Student Services as soon as possible in order to identify possible accommodations to enhance academic success.