

Syllabus for
CSC 382—Systems Design
3 Credit Hours
Spring 2004

I. COURSE DESCRIPTION

Advanced study of structured systems development. Emphasizes strategies and techniques of structured design for producing logical methodologies for dealing with complexity in developing information systems. Prerequisite: CSC 381.
Academic technology fee: \$45.

II. COURSE GOALS

This course is designed to enable the student to do the following:
Learn what is required to perform well in entry-level positions as system analysis and designers.
Comprehend the different ways systems are developed. Learn how to design or improve a complete system while relating critically in a group environment when obtaining data concerning a system. Finally, this course will increase the students' understanding of a network model and prototype.

III. COURSE OBJECTIVES

A. Terminal Objectives

As a result of successfully completing the course, the student will be able to:

1. perform well in entry-level positions as systems analysts and designers.
2. possess the ability to further study in management information systems and computer science, including graduate work.
3. explain and discuss different ways computer systems are developed.
4. use problem solving techniques related to the management of computer information systems.
5. discuss and demonstrate network modeling and data analysis.

B. Unit Objectives

1. For Unit I the student will be able to do the following:
 - a. discuss the principles related to successful management of a systems analysis and design project.
 - b. apply the tools and techniques necessary to discover the facts about existing and proposed systems.
 - c. perform a feasibility analysis to determine the feasibility of continuing with a systems design project.
 - d. design system input, output and controls.
 - e. perform an in-depth analysis for the design of a database management system.
 - f. identify and create a human computer interface.
2. For Unit II the student will be able to do the following:
 - a. list the major processes required for developing the implementation and support functions of a system.
 - b. use the appropriate tools and techniques to define data requirements for a new computer system.
 - c. create system structure charts to reflect the organization of a system.

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- d. develop user-friendly interfaces between humans and computers.

For Unit III the student will be able to do the following:

- a. apply healthy, effective interpersonal skills to a systems design project.
- b. discuss the activities that take place during the development and support phase of the system development life cycle.
- c. demonstrate the ability to design a system based on the analysis phase.
- d. present a report demonstrating their ability.

IV. TEXTBOOKS

- A. Required Textbook
Whitten, Jeffery L., Bentley, Lonnie D., Dittman, Kevin C., Systems Analysis and Design Methods, 6st Edition. New York: Irwin/McGraw Hill, 2003.
- B. Additional Reading Material May Be Required.

V. POLICY AND PROCEDURES

- A. University Policies and Procedures
 - 1. Attendance at each class or laboratory is mandatory at Oral Roberts University.
 - 2. Double cuts will be assessed for absences that immediately precede or follow holidays or breaks.
 - 3. Excessive absences can reduce a student's grade or deny credit for the course.
 - 4. Students taking a late examination because of an unauthorized absence will be charged a late exam fee.
 - 5. Students and faculty at Oral Roberts University adhere to all laws addressing the ethical use of other's materials, whether it is in the form of print, video, multimedia, or computer software.
 - 6. Final examines cannot be given before their scheduled times. Students need to check the final exam schedule before planning return flights or other events at the end of the semester.
- B. Computer Science & Mathematics Department policies and Procedures
 - 1. Each Student who uses the computer is given access to the appropriate computer resources. These limited resources and privileges are given to allow students to perform course assignments. Abuse of these privileges will result in their curtailment. Students should note that the contents of Computer directories are subject to review by instructors and the computer Administrative staff.
 - 2. A fee of \$10.00 will be assessed for all late exams. This policy applies to all exams taken without notifying the professor prior to the regularly scheduled exam time, and to all exams taken late without an administrative excuse.
- C. Course Policies and Procedures
 - 1. Evaluation Procedures
The final grade will be based approximately on the performance in four categories:
 - a. 20% on homework
 - b. 40% on exams
 - c. 20% on final exam
 - d. 20% on presentation
 - 2. Portfolio Requirements
The student is continue their portfolio by maintaining several homework assignment and a copy of the system design report generated during this semester,

VI. COURSE CALENDAR

<u>Unit</u>	<u>Meeting</u>	<u>Topic</u>
I	1	Introduction
	2	Overview of System Analysis Phase
	3-4	System Design Approach
	5-6	Design Architecture
	7-8	User Interface
	9	Examination I
II	10-12	Input and Output Design
	13-14	Object-Oriented Design and UML
	15-16	System Support
	17	Examination II
III	18-28	Project Preparation Using VISIO™ or PowerPoint™ or MS Projects™

29-30
31

Formal Project Presentation
Final Exam

Dr. Kenneth M. Preston
Name of Instructor

CSC 382
Course #

Systems Design
Title of Course

Computer Science and Mathematics
Name of Department

MISSION

The lifestyle at ORU is rooted in the word "Wholeness." ORU seeks to educate the whole person, with balanced emphasis placed on the development of the mind, spirit, and body.

GENERAL OUTCOMES

1. Spiritual Development
2. Physical Development
3. Communication
4. Analysis
5. Problem Solving
6. Valuing in Decision-making
7. Social Interaction
8. Global Perspectives
9. Effective Citizenship
10. Aesthetic Responsiveness

MAJOR OUTCOMES

Achieves competence in the use of computer hardware and software, and is able to effectively communicate with those seeking to utilize computers in solving problems.

Develops the ability to describe the process by which a problem can be solved.

Analyzes problems to determine how theoretical patterns can be adapted to formulate practical solutions.

Gains experience in working with groups of people to develop computerized systems.

COURSE GOALS

Critical Thinking

Design processes, programs and data structures required by computer systems.

Problem Solving

Apply phases of systems design to the system development life cycle.

Communication

Present results of group projects.

Social Interaction

Function effectively as a member of a team solving ambiguous problems.

ASSESSMENT OF COURSE GOALS

STIMULI

Examinations
Assignments
Group Projects
Presentations

CRITERIA

Evaluation based on:
Homework 20%
Exams 40%
Presentations 20%
Final Exam 20%