

CTS 285
SYSTEMS ANALYSIS & DESIGN

COURSE DESCRIPTION:

Prerequisites: CIS 115

Corequisites: None

This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.
Course Hours Per Week: Class, 3. Lab, 0. Semester Hours Credit, 3.

COURSE OBJECTIVES:

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

- a. Define and describe the five phases of the system development life cycle.
- b. State at least five expected benefits from systems projects.
- c. Explain at least three ways in which information systems support business requirements.
- d. Describe how systems analysts interact with users, management, and other information systems professionals.
- e. Develop data flow diagrams and decision tables.
- f. Perform a feasibility study.
- g. Evaluate systems development alternatives.
- h. Solve realistic systems analysis problems.
- i. Determine methods for evaluating the effectiveness and efficiency of a system.
- j. Work as an effective team member on assigned projects.

OUTLINE OF INSTRUCTION:

- I. Introduction
 - A. Information system components
 - B. Types on information systems
 - C. System development life cycles
 - D. The systems analyst

- II. Systems planning
 - A. Systems requests
 - B. Objectives
 - C. Preliminary investigation

III. Determining requirements

- A. Interviews
- B. Other fact-finding techniques
- C. Recording facts
- D. JAD and RAD
- E. Object-oriented systems development

IV. Analyzing requirements

- A. Data flow diagrams
- B. Data dictionary
- C. Process description

V. Evaluating alternatives

- A. Software alternatives
- B. Evaluating software packages
- C. Hardware alternatives
- D. CASE tools

VI. Systems design

- A. Output design
- B. Input design
- C. File and database design
- D. System architecture

VII. Systems implementation

- A. Quality assurance
- B. Application development
- C. Documentation
- D. Management approval
- E. Installation
- F. Evaluation
- G. System operation

REQUIRED TEXTBOOKS AND MATERIALS:

Shelly/Cashman. Systems Analysis and Design. 6th ed. Thomson/Course Technology. ISBN 0619255102

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.