

Southeast Missouri State University

Department of Management

Course No. MG445

Title of Course: Systems Analysis and Design

Spring 2000

I. Catalog Description and Credit Hours of Course:

Study of a systematic on-going process of systems analysis, systems design, systems implementation, systems maintenance and systems security management. (3)

II. Prerequisite(s):

(MG375 Management Information Systems and MG410 Business Database Systems) OR (IS175 Information Systems I and IS275 Information Systems II) with a minimum grade of "C"

III. Purposes or Objectives of the Courses:

Upon completion of this courses the student should be able to understand:

- A. A systems approach to analyzing systems information requirements, transforming the requirements into logical/technical design specification, and implementing and maintaining information systems.
- B. The concepts, tools, and techniques for effectively analyzing business systems and procedures.
- C. The concepts, tools, and techniques for effectively designing business systems and procedures.
- D. The concepts, tools, and techniques for effectively implementing business systems and procedures.
- E. How to undertake preventive measures to keep information systems current via changing hardware, software, and procedures in response to new user requirements.

IV. Expectation of Students:

- A. Students are expected to be fully participate in class discussions involving assigned readings, lectures and other activities such as individual and team projects and other class assignments.
- B. Students are expected to behave in an academically honest manner to preserve the integrity of the classroom and the learning environment.
- C. Students are expected to be familiar with the contents of the class outline and other instructions provided by the instructor.

V. Course Content or Outline:

- A. Overview and Introduction to Management Systems Analysis and Design (3)
- B. Overview of the Systems Development Life Cycles (3)
 - 1. Recognition of need
 - 2. Analysis
 - 3. Design
 - 4. Implementation and maintenance
- C. Planning and Launching an Initial Investigation (3)
- D. Tools of Structured Analysis and Design (6)
 - 1. Tools of structured analysis
 - a. system flow chart
 - b. data flow diagram
 - c. data dictionary
 - d. data structure diagram
 - 2. Tools of structured design
 - a. structured chart
 - b. pseudocode
 - c. Input/output layouts
 - d. file and database layouts
- E. Feasibility Analysis and Report (3)
- F. Cost Benefit Analysis (3)
- G. Logical Design Specification (3)
 - 1. Preliminary design requirements
 - 2. Preparing the structured specification
 - 3. Design schedule and budget
- H. Input/Output Design (3)
- I. Database Design (6)
- J. Procedure for Hardware/Software Selection (3)
- K. System Testing and Conversion (3)
- L. Planning Systems Security and Disaster Recovery Planning (3)
- M. Systems Maintenance (3)

VI. Textbook(s) and/or Other Required Materials or Equipment:

Jeffry A. Hoffer, Joey F. George, and Joseph S. Valachich, *Modern Systems Analysis and Design*, Benjamin Cummings, 1996.

VII. Basis for Student Evaluation:

- A. Quality of participation in class
- B. Performance on examinations, pop quizzes, in-class assignments
- C. The quality of a research paper/project and its presentation in class
- D. The quality of homework, computer lab assignment