

**University of Arkansas – Fort Smith**  
**5210 Grand Avenue**  
**P.O. Box 3649**  
**Fort Smith, AR 72913-3649**  
**479-788-7000**

**General Syllabus**

**CS 4003 Systems Analysis and Design**

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisite: senior standing, CS 2022 IT Systems Management, and CS 3013 Human Computer Interaction

Effective Catalog: 2018-2019

**I. Course Information**

**A. Catalog Description**

Examines modern techniques and methodologies needed to plan, analyze, design and implement a computer based system.

**B. Additional Course Information**

Both structured and object oriented techniques will be introduced along with proven concepts for maintenance and troubleshooting of existing information systems.

Methodical techniques for project management, control, status reporting and effective user interaction will be presented. Emphasis on project teamwork and leadership are addressed including the ethical responsibilities of the systems analyst.

**II. Student Learning Outcomes**

**A. Subject Matter**

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

1. Evaluate the benefits and potential drawbacks of following a Systems Development Life Cycle methodology versus an alternate (for example Agile/OO) methodology.
2. Analyze and design project plans and feasibility studies using industry standard tools and techniques.
3. Analyze and evaluate systems problems using a variety of modeling techniques.
4. Identify, analyze, and design a solution, and provide potential pilot development as part of a team project.

## **B. University Learning Outcomes**

This course enhances student abilities in the following areas:

### **Analytical Skills**

**Critical Thinking Skills:** Students will utilize analytical skills to identify a problem, break it down into its components and design a solution.

### **Communication Skills (written and oral)**

Students will perform identification, analysis, design and implementation of models of systems and deliver oral class presentations concerning the scope, operational, usability and operational restrictions of the system.

### **Ethical Decision Making**

Students will recognize and analyze ethical dilemmas as they relate to information technology and computer related environments. Students will apply ethical concepts and rules to determine viable alternatives in any given situation.

## **III. Major Course Topics**

- A. Professional communications
- B. Teamwork concepts and issues
- C. Organizational context
- D. Requirements
- E. Acquisition and sourcing
- F. Integration and deployment
- G. Project management
- H. Testing and quality assurance
- I. Organizational context

