CIS C260: SYSTEMS ANALYSIS AND DESIGN

Item	Value
Curriculum Committee Approval Date	11/17/2023
Top Code	070200 - Computer Information Systems
Units	3 Total Units
Hours	72 Total Hours (Lecture Hours 54; Lab Hours 18)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Students will explore the topics of systems analysis and design and its applicability to the business world. The practical application of systems analysis and design will be experienced in hands-on projects. The process of business decision-making will be applied with an emphasis on the systems development life cycle. Careers and emerging trends in the field will be evaluated. ADVISORY: CIS C105. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Describe the phases of the systems development life cycle.
2. Apply the methods, techniques, and tools relevant to systems analysis and design.
3. Use business decision-making techniques to design appropriate solutions to meet organizational needs.

Course Objectives

- 1. Outline the purpose of systems analysis and design as used by professionals in industry.
- 2. Demonstrate how to apply the concepts of the systems development life cycle to develop an appropriate solution for a given business problem.
- 3. Explain how to apply analytical techniques used in business intelligence systems to uncover gaps within business processes.
- 4. Define requirements engineering and the process for designing a Work Breakdown Structure.
- 5. Describe the system architecture development process.

Lecture Content

Systems Planning Introduction to Systems Analysis and Design Analyzing the Business Case Managing Systems Projects Systems Analysis Requirements Modeling Data and Process Modeling Object Modeling Development Strategies Systems Design User Interface Design Data Design Systems Architecture Systems Implementation Managing Systems Implementation Systems Support and Security Managing Systems Support and Security

Lab Content

Evaluation of system requirements Data modeling with Joint Application Development Defining relationships among objects and classes Creation of a Work Breakdown Structure Creation of a decision table Use process modeling tools to develop an activity diagram

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

This course will utilize a combination of lecture, hands-on guided laboratory assignments, classroom/discussion student interactions, quizzes, tests, and problem-solving and troubleshooting assignments to achieve the goals and objectives of this course. All instructional methods are consistent across all modalities.

Reading Assignments

Read about the systems development life cycle and managing systems projects Read about requirements modeling and Work Breakdown Structure Read about managing systems implementation

Writing Assignments

Written report about user stories Written report and discussion about data backup services Written assignment about date formats in databases, user interfaces, and globally Presentations with PowerPoint slides

Out-of-class Assignments

Analyzing the business case Data and process modeling

Demonstration of Critical Thinking

Students will provide critical feedback for others' projects and well-known database storage systems discussed in class.

Required Writing, Problem Solving, Skills Demonstration

Skills will be demonstrated during presentation and written reports throughout the course. Presentations include PowerPoint slides created by individual and/or student teams, and visual demonstrations of the materials they have created.

Eligible Disciplines

Computer information systems (computer network installation, microcomputer ...: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience. Computer service technology: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Tilley, Scott. Systems Analysis and Design, 12th ed. Cengage, 2020

Other Resources

1. Coastline Library 2. OER - Open Educational Resources