



Course Description

Exploration of structured systems analysis and design terminology and techniques. Presents a foundation in systems design and documentation necessary for effective communication and career advancement for all technology professionals.

Course Textbook

Rosenblatt, H. J. (2014). *Systems analysis and design* (10th ed.). Boston, MA: Course Technology.

Course Learning Outcomes

Upon completion of this course, students should be able to:

1. Identify information technology tools and services that satisfy the needs of various organizational structures.
2. Recognize design methodologies to include prototyping, development life cycle, and structured analysis.
3. Examine the use of data flow diagrams, data dictionary definitions, and structured English as used in the information technology field.
4. Apply techniques of system analysis and design to an information systems problem.
5. Assess the value of information technology when addressing global, national, and local industry needs.

Credits

Upon completion of this course, the students will earn three (3) hours of college credit.

Course Structure

1. **Study Guide:** Each unit contains a Study Guide that provides students with the learning outcomes, unit lesson, required reading assignments, and supplemental resources.
2. **Learning Outcomes:** Each unit contains Learning Outcomes that specify the measurable skills and knowledge students should gain upon completion of the unit.
3. **Unit Lesson:** Each unit contains a Unit Lesson, which discusses lesson material.
4. **Reading Assignments:** Each unit contains Reading Assignments from one or more chapters from the textbook.
5. **Suggested Reading:** Chapter presentations are provided in each unit study guide as Suggested Reading to aid students in their course of study. Students are encouraged to read the resources listed if the opportunity arises, but they will not be tested on their knowledge of the Suggested Readings.
6. **Learning Activities (Non-Graded):** These non-graded Learning Activities are provided in each unit to aid students in their course of study.
7. **Discussion Boards:** Discussion Boards are part of all CSU term courses. More information and specifications can be found in the Student Resources link listed in the Course Menu bar.
8. **Unit Quizzes:** This course contains four Unit Quizzes, one to be completed at the end of Units II, IV, VI, and VII. Quizzes are used to give students quick feedback on their understanding of the unit material and are composed of multiple-choice questions and written response questions.
9. **Unit Assignments:** Students are required to submit for grading Unit Assignments in Units I, III, V, and VIII. Specific information and instructions regarding these assignments are provided below. Grading rubrics are included with each assignment. Specific information about accessing these rubrics is provided below.

10. **Ask the Professor:** This communication forum provides you with an opportunity to ask your professor general or course content related questions.
11. **Student Break Room:** This communication forum allows for casual conversation with your classmates.

CSU Online Library

The CSU Online Library is available to support your courses and programs. The online library includes databases, journals, e-books, and research guides. These resources are always accessible and can be reached through the library webpage. To access the library, log into the myCSU Student Portal, and click on "CSU Online Library." You can also access the CSU Online Library from the "My Library" button on the course menu for each course in Blackboard.

The CSU Online Library offers several reference services. E-mail (library@columbiasouthern.edu) and telephone (1.877.268.8046) assistance is available Monday – Thursday from 8 am to 5 pm and Friday from 8 am to 3 pm. The library's chat reference service, *Ask a Librarian*, is available 24/7; look for the chat box on the online library page.

Librarians can help you develop your research plan or assist you in finding relevant, appropriate, and timely information. Reference requests can include customized keyword search strategies, links to articles, database help, and other services.

Unit Assignments

Unit I Essay

Systems development life cycle (SDLC) is a very important methodology that assists IT professionals in the development of methods and procedures for new or re-engineered systems.

For this essay, imagine you are approached by a member of a business department that has no idea what SDLC is, and they want to know when a physical model is created. You must first describe the SDLC and its phases. Then, explain when a physical model can be created. Also, be sure to indicate which phase you think is the most important.

Your essay should contain a minimum of 300 words. Format your essay using APA style. Use your own words, and include citations and references as needed to avoid plagiarism.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit III Essay

Agile, JAD, and RAD Application Development

As a systems analyst, you must use the best application tools to analyze the proposed system to be developed. Write an essay describing the advantages and disadvantages for agile, JAD, and RAD approaches to application development methods.

Your essay should contain a minimum of 300 words. Format your essay using APA style. Use your own words, and include citations and references as needed to avoid plagiarism.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit V Assignment

Object-Oriented Modeling

You are a member of the systems development team for XYZ Car Manufacturer. The project manager has tasked you to design an object-oriented modeling for the company vehicle line that consists of cars, minivans, trucks, SUVs, and hybrids. The project manager has assigned you the following three tasks:

1. Briefly explain what are objects, attributes, and methods of the O-O model.
2. Draw an object model(s) and list a minimum of five attributes and five methods for the class and subclass for the XYZ Car Manufacturer (cars, minivans, trucks, SUVs, and hybrids).

3. Lastly, draw a use case model of the buyer purchasing a vehicle. (Be sure to include class diagrams in your model.)

Your assignment should contain a minimum of 300 words. Format your assignment using APA style. Use your own words, and include citations and references as needed to avoid plagiarism.

NOTE: Windows and Mac owners: All you need is a simple drawing program such as Paintbrush. Mac owners can download the software from the Mac App Store.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VIII Final Project

At the end of this course, you will complete a final project that will assess your understanding and comprehension of systems development. The minimum written requirement is five pages and may extend beyond the five pages due to the size of the drawings.

Scenario:

The Cycle Stationary Unit (CSU) is a company that sells stationary cycles to fitness centers, rehabilitation centers, and home consumers. CSU is a multi-million dollar business that employs 1,000 employees for the building, selling, packaging, and shipping of their products to consumers. You are a systems analyst, and management has tasked you to create a new point of sale (POS) system for CSU.

You must complete the following requirements for this final project:

1. Describe briefly the five steps of the systems development life cycle.
2. Differentiate between agile, JAD, and RAD methodologies. Which will you use for the development, and why? Would you use a prototype method?
3. Summarize the six steps of the preliminary investigation and the project triangle.
4. Explain what a data flow diagram (DFD) is. Illustrate by drawing a DFD of a *context diagram* point of sale (POS) system using the Gane and Sarson symbols and a *data store DFD*.
5. Discuss what object-oriented development is, and draw an object model of the point of sale system. Remember you must have an object model, attributes, and methods in the object model. Also, draw a *use case modeling* UML (Unified Modeling Language) for the POS.
6. Describe the seven basic principles for developing user interface design. Draw a simple entity relationship diagram (ERD) for the POS.
7. Summarize the last step of the SDLC of systems support and security. Why is this so important to the Cycle Stationary Unit (CSU) organization?
8. Explain what global, national, or local industry needs could affect the POS system.

NOTE: All requirements must be completed in the order shown. Format your assignment using APA style. Windows and Mac owners: All you need is a simple drawing program such as Paintbrush. Mac owners can download the software from the Mac App Store.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

APA Guidelines

The application of the APA writing style shall be practical, functional, and appropriate to each academic level, with the primary purpose being the documentation (citation) of sources. CSU requires that students use APA style for certain papers and projects. Students should always carefully read and follow assignment directions and review the associated grading rubric when available. Students can find CSU's Citation Guide by clicking [here](#). This document includes examples and sample papers and provides information on how to contact the CSU Success Center.

Grading Rubrics

This course utilizes analytic grading rubrics as tools for your professor in assigning grades for all learning activities. Each rubric serves as a guide that communicates the expectations of the learning activity and describes the criteria for each level of achievement. In addition, a rubric is a reference tool that lists evaluation criteria and can help you organize your

efforts to meet the requirements of that learning activity. It is imperative for you to familiarize yourself with these rubrics because these are the primary tools your professor uses for assessing learning activities.

Rubric categories include: (1) Discussion Board, (2) Assessment (Written Response), and (3) Assignment. However, it is possible that not all of the listed rubric types will be used in a single course (e.g., some courses may not have Assessments).

The Discussion Board rubric can be found within Unit I's Discussion Board submission instructions.

The Assessment (Written Response) rubric can be found embedded in a link within the directions for each Unit Assessment. However, these rubrics will only be used when written-response questions appear within the Assessment.

Each Assignment type (e.g., article critique, case study, research paper) will have its own rubric. The Assignment rubrics are built into Blackboard, allowing students to review them prior to beginning the Assignment and again once the Assignment has been scored. This rubric can be accessed via the Assignment link located within the unit where it is to be submitted. Students may also access the rubric through the course menu by selecting "Tools" and then "My Grades."

Again, it is vitally important for you to become familiar with these rubrics because their application to your Discussion Boards, Assessments, and Assignments is the method by which your instructor assigns all grades.

Communication Forums

These are non-graded discussion forums that allow you to communicate with your professor and other students. Participation in these discussion forums is encouraged, but not required. You can access these forums with the buttons in the Course Menu. Instructions for subscribing/unsubscribing to these forums are provided below.

[Click here for instructions on how to subscribe/unsubscribe and post to the Communication Forums.](#)

Ask the Professor

This communication forum provides you with an opportunity to ask your professor general or course content questions. Questions may focus on Blackboard locations of online course components, textbook or course content elaboration, additional guidance on assessment requirements, or general advice from other students.

Questions that are specific in nature, such as inquiries regarding assessment/assignment grades or personal accommodation requests, are NOT to be posted on this forum. If you have questions, comments, or concerns of a non-public nature, please feel free to email your professor. Responses to your post will be addressed or emailed by the professor within 48 hours.

Before posting, please ensure that you have read all relevant course documentation, including the syllabus, assessment/assignment instructions, faculty feedback, and other important information.

Student Break Room

This communication forum allows for casual conversation with your classmates. Communication on this forum should always maintain a standard of appropriateness and respect for your fellow classmates. This forum should NOT be used to share assessment answers.

Grading

Discussion Boards (8 @ 2.5%)	= 20%
Quizzes (4 @ 5%)	= 20%
Essays (2 @ 10%)	= 20%
Unit V Assignment	= 15%
Unit VIII Final Project	= 25%
Total	= 100%

Course Schedule/Checklist (PLEASE PRINT)

The following pages contain a printable Course Schedule to assist you through this course. By following this schedule, you will be assured that you will complete the course within the time allotted.

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Unit I	Introduction to Systems Analysis and Design
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 1: Introduction to Systems Analysis and Design <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Essay by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit II	Analyzing the Business Case and Managing Systems Projects
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 2: Analyzing the Business Case <input type="checkbox"/> Chapter 3: Managing Systems Projects <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Quiz by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit III	Requirements Modeling
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 4: Requirements Modeling <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Essay by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit IV	Data and Process Modeling
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 5: Data and Process Modeling <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Quiz by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit V	Object Modeling
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 6: Object Modeling <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Assignment by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit VI	Development Strategies
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 7: Development Strategies <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Quiz by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit VII	User Interface and Data Design
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 8: User Interface Design <input type="checkbox"/> Chapter 9: Data Design <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Quiz by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	

Unit VIII	System Architecture, Implementation, and Support/Security
Review:	<input type="checkbox"/> Unit Study Guide <input type="checkbox"/> Learning Activities (Non-Graded): See Study Guide
Read:	<input type="checkbox"/> Chapter 10: System Architecture <input type="checkbox"/> Chapter 11: Managing Systems Implementation <input type="checkbox"/> Chapter 12: Managing Systems Support and Security <input type="checkbox"/> Suggested Reading: See Study Guide
Discuss:	<input type="checkbox"/> Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time) <input type="checkbox"/> Discussion Board Comment: Comment on another student's Discussion Board response by Tuesday, 11:59 p.m. (Central Time)
Submit:	<input type="checkbox"/> Final Project by Tuesday, 11:59 p.m. (Central Time)
Notes/Goals:	