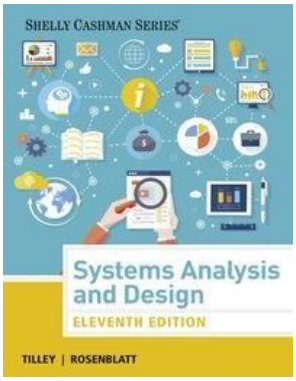
Systems Analysis and Design

Required Texts



Rosenblatt, Harry J. (2016). Systems analysis and design, (11th ed.). Cengage Learning.

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Course Description

This course introduces the concepts, tools and techniques used in the analysis, design and deployment of information systems which support business requirements. Topics include requirements determination, data and process modeling, various development methodologies, project management, data and user interface design, security, implementation and maintenance, and documentation.

Course Objectives

- Explain system analysis and design by examining the role of information technology in today's business environment
- Describe how projects are started, evaluated with the use of project management tools, techniques to plan, schedule, monitor and report on project status
- Evaluate the various modeling techniques like requirements, data, and process modeling used to gather facts, transform data in designing and developing a useful system
- Interpret object modeling and development strategies to create effective logical models and use various development strategies for new systems to transition to the systems design phase
- Explain user interface design as it relates to designing an effective user interface, handling data security and control issues
- Explore data design which is necessary for the systems analyst to construct physical monitoring of an information system
- Describe and evaluate system architecture as it translates to a logical design within an information system to produce a physical blueprint

- Describe application development, documentation, testing, training, data conversion, and system change over to the new system
- Evaluate the systems support and security tasks through the life cycle of the system which includes maintenance, security, backup, disaster recovery, performance measurement, and system obsolescence

Credit Hours: 3

Prerequisites: CS265 or IS242

Testing

This is a proctored course. Distance Education Accrediting Commission (DEAC) requires validation “that the student who takes an assessment is the same person who enrolled in the program and that the examination results will reflect the student’s own knowledge and competence in accordance with stated learning outcomes.” (Retrieved February 23, 2021 from The DEAC Accreditation Handbook, page 92). Grantham University utilizes the services of ProctorU to meet this requirement.

Proctored Exam Information:

This course includes a proctored exam. You must register to take your exam using this link. You may register for and schedule your exam at any time after the course start date. To take the proctored exam you must:

- Have a webcam
- Provide valid picture ID to the proctor before the exam starts
- Use a computer that will allow a live proctor from ProctorU (a third party) to temporarily take control of your computer
- Test must be scheduled at least 72 hours prior to the time you plan on completing the exam or there will be a fee paid directly to ProctorU (credit card or debit card only)
- Take the exam in a room with no other people, distractions, or interferences
- Review these three links: ProctorU – Getting Started, ProctorU – How it Works, Exam Rules

If you do not attempt the Proctored Exam, you will be unable to access assignments and exams for all weeks following the Proctored Exam, essentially resulting in a failing grade for the course. In order to unlock assignments and exams in future weeks, schedule and complete your Proctored Exam in a timely manner.

Tentative Course Schedule

Course Week	Weekly Content
Week 1 "The Systems Analyst"	• Read Chapter 1 • Video Lecture • Discussion "Personal Experiences" • Assignment "The Role of the Systems Analyst" □ W1 Quiz

Week 2	Read Chapter 2 and Chapter 3
Course Week	**Weekly Content**
"The Business Case"	• Video Lecture 1 • Video Lecture 2 • Discussion "IT Project Considerations" • Assignment "Project Management Gantt Chart" W2 Quiz
Week 3 "Requirements Modeling"	• Read Chapter 4 and Chapter 5 • Video Lecture 1 • Video Lecture 2 • Discussion "Agile Method" • Reflective Journal • Assignment "Functional Decomposition Diagrams" W3 Quiz
Week 4 "Object Modeling"	• Read Chapter 6 and Chapter 7 • Video Lecture 1 • Video Lecture 2 • Discussion "Use Case Diagram" • Assignment "Object Relationship Diagram" W4 Quiz
Week 5 "User Interface"	• Read Chapter 8 and Chapter 9 • Video Lecture 1 • Video Lecture 2 • Discussion "User Interface" • Assignment "Source Document" • W5 Proctored Midterm Exam
Week 6 "System Architecture"	• Read Chapter 10 • Video Lecture • Discussion "Ecommerce" • Assignment "Wireless Topology" • W6 Quiz
Week 7 "Quality Assurance"	• Read Chapter 11 • Video Lecture • Discussion "Systems Changeover" • Reflective Journal • Assignment "Post-Implementation Evaluation"
Week 8 “Systems support and Security”	• Read Chapter 12 • Video Lecture • Discussion “Review and Reflect” • Assignment “SWOT Analysis” • Final Exam

Grading Policy

Grading Category	**Grade Weight**

Discussions	20%
Assignments	30%
Reflective Journals	10%
Proctored Exam	15%
Grading Category	**Grade Weight**
Quizzes	10%
Final Exam	15%

Estimated Student Workload

The following table outlines the academic effort required by students to become successful in this course. While the times in the table are hourly approximations, it is presented to help students with their time management. Please note, depending on the student's background knowledge and experience of the course subject, and an individual student's academic capabilities, these times will vary.

Course Week	Activity and Time Required
Week 1	• Reading/Watching: 2.1 • Discussion: 3.0 • Homework: 5.0 • Total Time Estimated: 10.1
Week 2	• Reading/Watching: 3.0 • Discussion: 5.0 • Homework: 8.0 • Total Time Estimated: 16.0
Week 3	• Reading/Watching: 4.4 • Discussion: 5.0 • Homework: 12.0 • Total Time Estimated: 21.4
Week 4	• Reading/Watching: 2.0 • Discussion: 3.0 • Homework: 8.0 • Total Time Estimated: 13.0
Week 5	• Reading/Watching: 3.9 • Discussion: 3.0 • Homework: 12.0 • Total Time Estimated: 18.9
Week 6	• Reading/Watching: 2.0 • Discussion: 5.0 • Homework: 11.0 • Total Time Estimated: 18.0
Week 7	• Reading/Watching: 2.4 • Discussion: 3.0 • Homework: 10.0 • Total Time Estimated: 15.4

Week 8	• Reading/Watching: 2.6 • Discussion: 5.0 • Homework: 11.0 • Total Time Estimated: 18.6