Course Summary

Description

Course Description: This course is an overview of the system development life cycle. Emphasis on current system documentation through the use of both classical and structured tools/techniques for describing process flows, data flows, data structures, file designs, input and output designs and program specifications. Discussion of the information gathering and reporting activities and of the transition from analysis to design.

Course Scope:

This course takes an in-depth look at key concepts and techniques for system analysis and design. The course explores system design modeling techniques for both the traditional structured approach and the object-oriented approach. Emerging techniques and approaches are introduced, including the Rational Unified Process (RUP), Extreme Programming (XP), and the Spiral Model. Students will examine rapid application development, component-based development, packaged solutions, and Enterprise Resource Planning (ERP). Students will learn the various strategic alternatives to custom development.

Objectives

After successfully completing this course, you will be able to

1. Describe the activities of systems analysis
2. Develop activity diagram to model flow of activities
3. Outline the process of systems analysis and design in the development of information systems
4. Explain the six core processes of the Systems Development Life Cycle
5. Summarize the use of the systems development Life cycle in software development
6. Explain use case realization
7. Outline implementation and deployment activities
8. Apply the principles of systems analysis and design in the development of information systems

Outline

Week 1:

Topics
Software Development and Systems Analysis and Design

Systems Development Lifecycle

Systems Analysis Activities

Learning Objectives

Describe the activities of systems analysis

Readings

Chapter 1: From Beginning to End: An Overview of Systems Analysis and Design

Chapter 2: Investigating System Requirements

Assignments

Introduction

Week 1 Forum

**Week 2:**

Topics

User Case Diagrams

The Domain Model Class Diagram

The System Sequence Diagram—Identifying Inputs and Outputs

Learning Objectives

- Develop activity diagram to model flow of activities

Readings

Chapter 3: Use Cases

Chapter 4: Domain Modeling

Chapter 5: Extending the Requirements Models

Assignments

Week 2 Forum

Week 2: Case Study

**Week 3:**

Topics

The Elements of Design

User and System Interfaces

Learning Objectives
- Outline the process of systems analysis and design in the development of information systems

Readings
Chapter 6: Essentials of Design and the Design Activities
Chapter 7: Designing the User and System Interfaces

Assignments
Week 3 Forum
Week 3: Article Summary

Week 4:

Topics
User Interfaces and System Interfaces

Learning Objectives
Explain the six core processes of the Systems Development Life Cycle

Readings
Chapters 1-7

Assignments
Week 4 Forum
Week 4: Midterm Assignment

Week 5:

Topics
Methodologies, Models, Tools and Techniques
Principles of Project Management
Fundamental Principles of Object-Oriented Detailed Design

Learning Objectives
Summarize the use of the systems development Life cycle in software development

Readings
Chapter 8: Approaches to System Development
Chapter 9: Project Planning and Project Management
Chapter 10: Object-Oriented Design: Principles

Assignments
Week 5 Forum
Week 5: Case Study
**Week 6:**

Topics

Use Case Realization with Sequence Diagrams

Databases and Database Management Systems (DBMS)

Learning Objectives

Explain use case realization

Readings

Chapter 11: Object-Oriented Design: Use Case Realizations

Chapter 12: Databases, Controls, and Security

Assignments

Week 6 Forum

**Week 7:**

Topics

Planning and Managing Implementation, Testing, and Deployment

Trends in System Development Methodologies

The Web as an Application Platform

Learning Objectives

- Outline implementation and deployment activities

Readings

Chapter 13: Making the System Operational

Chapter 14: Current Trends in System Development

Assignments

Week 7 Forum

**Week 8:**

Topics

Course Wrap up and Feedback

Final Project/Assignment

Learning Objectives

- Apply the principles of systems analysis and design in the development of information systems
Evaluation

Written communications is an essential tool for any professional. As with any skill, writing well is the result of practice followed by feedback, and the use of relevant and appropriate sources. Therefore, the quality of writing is graded as part of every written assignment. Below are the grading criteria for each written assignment in this class.

Content & Development 50%

- All key elements of the assignment are covered in a substantive way.
- Content is comprehensive, accurate, and/or persuasive.
- Major points are stated clearly, are supported by specific details, examples, or analysis, and are organized logically.
- Where appropriate, the paper supports major points with theory relevant to the development of the ideas, and uses the vocabulary of the theory correctly.
- Theory and practice are integrated, whereby the writer is able to link theories to practical experience (i.e., application to a real-world work setting).
- Research is adequate and timely for the topic.
- The context and purpose of the writing is clear (e.g., critique, research, sample memo, and business plan).

Organization 20%

- The structure of the paper is clear and easy to follow.
- The paper’s organization emphasizes the central theme or purpose and is directed toward the appropriate audience.
- Ideas flow in a logical sequence.
- The introduction provides sufficient background on the topic and previews major points.
- Paragraph transitions are logical and reinforce the flow of thought throughout the paper.
- The conclusion is logical and flows from the body of the paper.
- The conclusion reviews the major points.

Format 10%

- The paper, including citations and the reference page.
- The paper is laid out effectively and uses reader-friendly aids (e.g., sections, summaries, table of contents, indices, and appendices), when appropriate.
- The paper utilizes references appropriately.
- Features such as headings and italics aid in the readability of the paper and are not overused.
- The paper is neat, with attention given to format requirements.

Grammar, Punctuation, & Spelling 15%

- Rules of grammar, usage, and punctuation are followed.
- Spelling is correct.

Readability & Style 5%
Forums are complete, clear, and concise.
Sentences are well constructed, with consistently strong, varied structure.
Sentence transitions reinforce the flow of thought.
Words used are precise and unambiguous.
The tone is appropriate to the content and assignment.

FORUM

The Forum assignments for this course are designed to promote interactivity among students and enhance the online learning process. The Forum provides maximum flexibility because you do not have to be online at the same time as another person and you can read what other students have written.

Forum Timing: For the forum, you must post your work by midnight on Thursday, continue to follow your classmates’ posts for the remainder of the week, and post the follow-up peer responses prior to midnight on Sunday, except for week one. Your follow-up posts can add additional insight to a classmate’s opinions or can challenge their opinions. Use examples from the readings, or from your own research, to support your views, as appropriate. Be sure to read the follow-up posts to your own posts and reply to any questions or requests for clarification. You are encouraged to conduct research and use other sources to support your answers.

Required Participation: Please keep in mind that the forum assignments require you to make at least 1 post to the forum with at least 250 words about the topic and also respond to at least 2 peers’ posts with at least 150 words. Please be advised that there will be point deductions if you do not comply with these requirements of the assignment. Each one of you will have a different and unique experience that we can all learn from. Your participation in the Forums unleashes the power of synergy in our classroom. To facilitate this interaction, please be prompt when posting your forum work for each week; this provides time for the others to actively engage in the dialogue. For practical reasons, when you respond to other learners’ posts, please start your response by referencing their name. I will read and grade your participation by reading the forum. There is no need to also post your forum work in the assignments area of the classroom. Refer to the forum and the syllabus for more details on grading.

FINAL ASSIGNMENT

The Final Assignment requires you to use your knowledge gained throughout the course apply what you learned in an interactive assessment.

Grading:

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<tr>
<th>Name</th>
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<tr>
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<tr>
<td>Final Assignment</td>
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Materials

Book Title: Systems Analysis and Design in a Changing World, 6th ed - The VitalSource e-book is provided via the APUS Bookstore; hard copy not available from the APUS Bookstore, please try other sources.

Author: Satzinger, John W

Publication Info: Cengage

ISBN: 9781111534158

Book Title: You must validate your cart to get access to your VitalSource e-book(s). If needed, instructions are available here - http://apus.libguides.com/bookstore/undergraduate

Author: N/A

Publication Info: N/A

ISBN: N/A

Additional references are found in the Lessons Page of the classroom.

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 20% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report
instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an ongoing discussion about the assigned content.
- “Substantive” means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting viewpoints, we must respect each individual’s own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation’s military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.
STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.