

Systems Analysis & Design

COMP-1230

Mr. Michael Kelly

Class Meetings

On-Line via WebEx

Contact Information

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TEXT

We will be using an e-book available for download on my website:

Systems Analysis and Design by Howard Gould

Bookboon.com

https://www.ccri.edu/faculty_staff/comp/kelly/courses/SystemsAnalysisAndDesign%20Text.pdf

COURSE ORGANIZATION

This course meets in a fully on-line format. There will be class discussion, lecture, and office hours each Thursday evening at 7:00pm using Webex Teams. For those who cannot make it, the weekly sessions will be recorded and posted in Webex in the course space for review.

As the class moves into the project portion, groups will schedule meeting times with me (again via Webex Teams) on agreed upon times during the week.

Quizzes and exams will be taken during the week as assigned in the syllabus in Blackboard. You must communicate with me at least one week prior to make adjustments to this time.

COURSE DESCRIPTION

This course explores the methodologies and theories involved in system design. Class lecture and assignments revolve around a case study analysis used to illustrate the basic concepts, methodologies and techniques used in the design of computerized systems. Each of the phases of the Systems Development Life Cycle: (Planning, Analysis, Design, Implementation, and Support) is covered in this case study.

The case study is based on a real business problem and the students are responsible to interact with the main participants in a courteous and professional manner. The first portion of the course focuses upon the Planning and Analysis phases of the Systems Development Life Cycle (SDLC). Information gathered through interviewing, questionnaires, and research provide the basis for the Preliminary Investigation Report. Students then continue to develop a systems flow diagram, which will become the foundation upon which the Data Flow Diagrams are constructed. A Context Diagram and Diagram 0 are constructed for the entire system, and one process (as selected by the instructor) is decomposed through to a functional primitive status.

In the second portion of the course, students design the file structure, develop Data and Entity Relationships, construct a Data Dictionary and determine input form and report requirements. A prototype along with supporting documentation and controls is developed to provide the user with an illustration of the solution.

In the final portion of the course students describe the infrastructure and support required to install and support their design. In this portion students illustrate a sample systems environment detailing hardware, software and any necessary networking required. To complete the design, training schedules, documentation, proposed maintenance agreements and an implementation strategy is detailed.

The resulting document is produced to represent a proposed system solution that will be presented to management for review, not as a series of homework solutions.

LEARNING OUTCOMES:

- Conduct a needs analysis with end-users
- Construct Activity Diagrams to analyze work flows
- Develop Data Flow Diagrams to create a system design
- Design a database to support an information system
- Create an application to support the needs analysis
- Document procedures to support a system design
- Present a system solution to the end-user

In addition, students are responsible for following the policies set forth in the Student Handbook (http://www.ccri.edu/advising/student_services/handbook.html) and College Catalog (<http://www.ccri.edu/catalog/>)

GRADING

Grading for the course will consist of the following:

1 Exam (75 points) + 3 Quizzes (45 points)	120 points
Case Project	100 points
Attendance and Participation	15%

EXAM(S)

Three quizzes and one exam will be given during the semester (see class schedule below). There are no make-up exams. Students with valid pre-arranged absences are allowed to take their exam prior to the originally scheduled date.

CASE PROJECT

The group project is an accumulation of assignments that are distributed throughout the semester. It should be presented as a system proposal not merely an accumulation of work. Grading of this proposal is based upon completeness, accuracy, soundness of approach and presentation. Please note, all members of the group will be assigned the same grade for the proposal.

Services for Students with Disabilities

Any student with a documented disability may arrange reasonable accommodations. As part of this process, students are encouraged to contact the office of Disability Services for Students as early in the semester as possible (<http://www.ccri.edu/dss/index.shtml>).

Weekly Schedule:

<u>Week</u>	<u>Dates</u>	<u>Topic(s)</u>
1	1/18 – 1/23	Course Overview Introduction to course tools: website, Blackboard, Webex Teams Chapter 1 (Introduction to Systems Analysis and Design) Introduce SDLC Approaches Create Groups
2	1/24 – 1/30	The Traditional SDLC Factors impacting projects Discuss Preliminary Investigation Steps Groups prepare Objectives / Questions for Needs Analysis
3	1/31 – 2/6	Conduct Needs Analysis --- 2/3 7:00pm on Webex Groups meet to discuss information gathered Each group to submit summary of Needs Analysis Quiz 1
4	2/7 – 2/13	Review Needs Analysis Information Support Circle Preliminary Investigation Discuss Activity Diagrams / BPM (Chapter 3, section 3.7)
5	2/14 – 2/20	Requirements Determination (Chapter 2, section 2.1) Quiz 2
6	2/21 – 2/27	Chapter 2 (Systems Analysis): Requirements Modeling Prepare for Exam 1
7	2/28 – 3/6	Exam 1
	3/7 – 3/13	Spring Break – No Class
8	3/14 – 3/20	Group Meetings to discuss project status Complete, Upload to Group Area in Webex: Organization Chart, BPM, Preliminary Investigation Report
9	3/21 – 3/27	Discuss Data Flow Diagrams (DFD's)
10	3/28 – 4/3	Group Meetings to work on DFD's
11	4/4 – 4/10	Group Meetings
12	4/11 – 4/17	Chapter 4 (Systems Design) Discuss ERD and Normalization Quiz 3
13	4/18 – 4/24	Discuss: Interface (Chapter 4) Systems Deployment (Chapters 5&6)
14	4/25 – 5/1	Group Meetings
15	5/2 – 5/8	Present Projects to Users Final Exam / Projects Due

*This syllabus is subject to change at any time at the discretion of the instructor.
Students are responsible for keeping current with changes made to this syllabus.*