

Systems Analysis & Design

COMP-1230

Mr. Michael Kelly

Semester: Fall 2018 Class Meetings

Friday 9:00 - 2:00

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

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) are 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 is based upon the Planning and Analysis phases of the Systems Development Life Cycle (SDLC). Information gathered through interviewing, questionnaires, and research provides the basis for the Preliminary Investigation Report. Students then continue to develop a systems flow diagram that becomes the foundation upon which the Data Flow Diagrams are constructed. A Context Diagram and Diagram 0 are generated for the entire system, and one process (as selected by the instructor) is developed 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. Samples and "mock-ups" are included for each, along with any and all documentation and controls.

The final portion of the course is where students produce an updated Systems Flowchart of their proposed solution, and describe the infrastructure and support required of 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 their implementation strategy are 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) + 1 Quiz (25 points)	100 points
Final Exam	50 points
Case Project	100 points
Attendance and Participation	15%

EXAM(s)

One quiz and one exam will be given during the semester (see class schedule below) and a final exam will be given on the last class meeting. There are no make-up exams. Students with valid pre-arranged absences will be 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>Date</u>	<u>Topic(s)</u>
1	9/7	Course Overview Chapter 1 (Introduction to Systems Analysis and Design) Create Groups
2	9/14	Introduce SDLC (Slides from Website) Discuss Preliminary Investigation / Activity Diagrams / BPM Prepare Interview Questions
3	9/21	Requirements Determination (Slides from Website) Conduct Q & A with Professor Kelly regarding project Refine questions for Bria Johnson
4	9/28	Conduct Project Interviews (Needs Analysis) → 10:00am Groups meet to discuss information gathered Each group to submit summary of information gathered
5	10/5	Review Needs Analysis Groups meet to prepare BPM / Preliminary Investigation Report
6	10/12	Chapter 2 (Systems Analysis) Prepare for Exam 1 Complete: Organization Chart, BPM (or Activity Diagram), Preliminary Investigation Report Upload to Spark
7	10/19	Exam 1
8	10/26	Discuss Data Flow Diagrams Work on Projects
9	11/2	Groups meet to work on DBD's
10	11/9	Chapter 4 (Systems Design) / Discuss ERD and Normalization
11	11/16	Work on Projects
12	11/23	Thanksgiving Recess
13	11/30	Chapter 5 (Systems Implementation) Chapter 6 (Systems Maintenance) Work on Projects
14	12/7	Present Projects to Users
Finals		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.