COURSE SYLLABUS**SYLLABUS**  
**COM290: Systems Design and Implementation**

Course Description

Students will apply the fundamental concepts of systems analysis and design in a comprehensive capstone project. Students will use the concepts and skill sets acquired in the previous classes to design and build an IT solution in a real world business scenario. The comprehensive capstone project will require students to work cooperatively in designing and implementing all aspects of an IT system.

General Course Information

|  |  |
| --- | --- |
| Number of Units/Weeks | 08/10 |
| #Hours Lecture/#Hours Laboratory/#Hours ELPs\* | 60/40/120 |
| Prerequisite(s) | ENG110, COM230, COM239, COM280, COM285, COM288, COM289 |
| Co-requisites (s) | None |
| Course Developer(s) | Leticia Rabor, M.S. |
| Date Approved / Last Review | August 2012 / March 2013 |

\*Enhanced Learning Projects

Learning Outcomes

* Identify a business problem, characterize its decision parameters and variables and organize them into a proper analytical model, and perform the correct solution procedure to come to a sound recommendation.
* Demonstrate to orally communicate ideas and concepts clearly and in an organized manner.
* Demonstrate the ability to write clear system documentation, user documentation, and security documentation.
* Demonstrate the ability to use current techniques, skills and tools for system development practice.
* Work effectively in teams in designing and implementing software systems.
* Design and implement a comprehensive information system.
* Discuss the five phases of the Systems Development Life Cycle (SDLC).
* Discuss their role as a software system analyst and programmer professional in support of overall business objectives and processes.

Instructional Methods Employed in this Course

* Lecture and reading assignments
* Hands-on exercises and labs
* Research
* Student presentations
* Practical application of theory and skills in authentic projects
* Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course

 **Textbook**  
Shelley Gary B., and Harry J. Rosenblatt. Systems Analysis and Design, 9th edition. Thomas Course Technology, Boston, MA, 2012. ISBN-13: 978-0-538-48161-8.

 **Other Materials**  
Coleman College. The College Writer’s Guide. San Diego: Coleman College, 2009.

 **Web Site Readings**  
 Software Design Tutorials

<http://www.smartdraw.com/tutorials/software-uml/uml.htm>

May 23, 2012

Object Management Group

<http://www.omg.org>

May 23, 2012

Table/Topics & Assignments

**Types of Assignments:**

Lecture -   
Considered Lecture Hours

**Classroom Discussion -**   
Considered Lecture Hours

**In Class Critique -**   
Considered Lecture Hours

**Delivering Oral Presentations -**   
Considered Lecture Hours

**In Class (IC) Exercise -**   
Considered Lecture Hours

**Reading -** +-

Considered Enhanced Learning Project (ELP), work done outside of class

**WebClass lesson (non-online courses) -**   
Considered ELP, work done outside of class

**Lab Work -**   
Considered Lab Hours

**Quiz, Midterm or Final -**   
Considered Lecture Hours

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Week 1 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 1A | Intro to Systems Analysis & Design | 2 |  |  |  |  |
| LEC 1B | Preliminary Investigation | 2 |  |  |  |  |
| LEC 1C | Managing Systems Project | 2 |  |  |  |  |
| LAB 1A | Exercise 1: Business Profile Memo  Evaluation: graded |  | 2 |  | 5 | Next Class Meeting |
| LAB 1B | Exercise 2: Project Scope  Evaluation: graded |  | 2 |  | 5 | Next Class Meeting |
| ELP 1A | Read Chapters 1 & 2  56 pages  Evaluation: Exercises/Project |  |  | 5.6 |  |  |
| ELP 1B | Read Chapter 3  33 pages  Evaluation: Exercises/Projects |  |  | 3.3 |  |  |
| Total Week 1 |  | 6 | 4 | 8.9 | 10 |  |
| Week 2 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 2A | Requirements Modeling | 3 |  |  |  |  |
| LEC 2B | Communication, Cost-Benefit Analysis | 3 |  |  |  |  |
| LAB 2A | Requirements Determination  Evaluation: To be included in Project Proposal 1 |  | 2 |  |  | Week 3 |
| LAB 2C | Cost-Benefit Analysis  Evaluation: To be included in Project Proposal 1 |  | 2 |  |  | Week 3 |
| ELP 2A | Read Chapter 4, 32 pages  Evaluation: Exercises/Projects |  |  | 3.2 |  |  |
| ELP 2B | Read Toolkits 1 & 3, 31 pages  Evaluation: Exercises/Projects |  |  | 3.1 |  |  |
| Total Week 2 |  | 6 | 4 | 6.3 | 0 |  |
| Week 3 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 3A | Data and Process Modeling | 2 |  |  |  |  |
| LEC 3B | Transition to Systems Design | 1 |  |  |  |  |
| LEC 3C | Systems Design: Input & Output Design | 2 |  |  |  |  |
| LEC 3D | Data Design | 1 |  |  |  |  |
| LAB 3A | DFD Evaluation: To be included in Project Proposal 2 |  | 1 |  |  | Week 4 |
| LAB 3B | User Interface Design  Evaluation: To be included in Project Proposal 2 |  | 1 |  |  | Week 4 |
| LAB 3C | Data Design  Evaluation: To be included in Project Proposal 2 |  | 1 |  |  | Week 4 |
| LAB 3D | Project Proposal 1  Evaluation: graded, 10 points |  | 1 |  | 10 | By the End of the Class |
| ELP 3A | Read Chapters 5 & 6  76 pages  Evaluation: Exercises/Projects |  |  | 7.6 |  |  |
| ELP 3B | Read Chapters 7 & 8, 47 pages  Evaluation: Exercises/Projects |  |  | 4.7 |  |  |
| ELP 3C | Read Chapters 9, 48 pages  Evaluation: Exercises/Projects |  |  | 4.8 |  |  |
| Total Week 3 |  | 6 | 4 | 17.1 | 10 |  |
| Week 4 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 4A | Systems Architecture | 3 |  |  |  |  |
| LEC 4B | Systems Implementation | 3 |  |  |  |  |
| LAB 4A | Project Proposal 2  Evaluation: graded, 10 points |  | 4 |  | 10 | By the End of the Class |
| ELP 4A | Read Chapter 10  38 pages  Evaluation: Exercises/Projects, |  |  | 3.8 |  |  |
| ELP 4B | Read Chapter 11  45 pages  Evaluation: Exercises/Projects |  |  | 4.5 |  |  |
| Total Week 4 |  | 6 | 4 | 8.3 | 10 |  |
| Week 5 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 5A | Quiz | 3 |  |  |  |  |
| LAB 5A | Write-ups  Evaluation: To be included in the presentation |  | 4 |  |  | Week 5 |
| LAB 4B | Final Project Proposal Evaluation: graded |  |  |  | 10 | By the End of the Class |
| ELP 5B | Review Chapters 1-11  **76 pages Evaluated by Exercises/Projects** |  |  | 7.6 |  |  |
| EXAM 5A | Midterm Exam | 3 |  |  | 25 |  |
| Total Week 5 |  | 6 | 4 | 7.6 | 35 |  |
| Week 6 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 6A | Implementation Project | 6 |  |  |  |  |
| LAB 6A | Implementation Project |  | 4 |  |  | Week 7 |
| ELP 6A | Implementation Project |  |  | 14 |  |  |
| Total Week 6 |  | 6 | 4 | 14 | 0 |  |
| Week 7 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 7A | Implementation Project | 6 |  |  |  |  |
| LAB 7A | Code Review 1: Implementation Project  Evaluation: graded, (code review 1) |  | 4 |  | 10 | By the End of the Class |
| ELP 7A | Implementation Project |  |  | 13 |  |  |
| Total Week 7 |  | 6 | 4 | 13 | 10 |  |
| Week 8 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 8A | Implementation Project | 6 |  |  |  |  |
| LAB 8A | Implementation Project |  | 4 |  |  | Week 9 |
| ELP 8A | Implementation Project |  |  | 14.8 |  |  |
| Total Week 8 |  | 6 | 4 | 14.8 | 0 |  |
| Week 9 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 9A | Implementation Project | 6 |  |  |  |  |
| LAB 9A | Code Review 2: Implementation Project  Evaluation: graded, (code review 2 on server) |  | 4 |  | 15 | By the End of the Class |
| ELP 9A | Implementation Project |  |  | 14 |  |  |
| Total Week 9 |  | 6 | 4 | 14 | 15 |  |
| Week 10 |  |  |  |  |  |  |
| Type | Topic/Description | LEC Hours | LAB Hours | ELP Hours | Point Value | Due |
| LEC 10A | Present and Explain System | 6 |  |  |  |  |
| LAB 10A | System Presentation  Evaluation: graded |  | 4 |  | 10 | By the End of the Class |
| ELP 10A | Present and Explain System |  |  | 16 |  |  |
| Total Week 10 |  | 6 | 4 | 16 | 10 |  |

Course Hours Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Topic | LEC Hours | LAB Hours | ELP Hours |
| 1 | Intro to Systems Analysis & Design, Preliminary Investigation | 6 | 4 | 8.9 |
| 2 | Requirements Modeling, Communication, Cost-Benefit Analysis | 6 | 4 | 6.3 |
| 3 | Data Process Modeling, Transition to Systems Design, Systems Design: Input & Output Design, Data Design | 6 | 4 | 17.1 |
| 4 | Systems Architecture , Project Management Tools | 6 | 4 | 8.3 |
| 5 | Systems Implementation | 6 | 4 | 7.6 |
| 6 | Implementation Project | 6 | 4 | 14 |
| 7 | Implementation Project | 6 | 4 | 13 |
| 8 | Implementation Project | 6 | 4 | 14.8 |
| 9 | Implementation Project | 6 | 4 | 14 |
| 10 | Present and Explain System | 6 | 4 | 16 |
| Total |  | 60 | 40 | 120 |

Table/Point Breakdown

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Assignment | Possible Points | Percent  of Grade |
| 1 | Exercise 1: Business Profile Memo | 5 | 5 |
| 1 | Exercise 2: Project Scope | 5 | 5 |
| 3 | Proposal 1 | 10 | 10 |
| 4 | Proposal 2 | 10 | 10 |
| 5 | Final Project Proposal | 10 | 10 |
| 5 | Quiz | 0 | 0 |
| 5 | Midterm | 25 | 25 |
| 6 | Code Review 1: Implementation Project | 10 | 10 |
| 8 | Code Review 2: Implementation Project | 15 | 15 |
| 10 | System Presentation  Evaluation | 10 | 10 |
| Total |  | 100 | 100% |

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

**Coleman University Grade Assignment Policy:**

The Coleman University guidelines for the assignment of grades to total points earned is as follows:

|  |  |  |
| --- | --- | --- |
| **Percent** | **Letter Grade** | **Grade Points** |
| 94-100 | A | 4.0 |
| 90-93 | A- | 3.67 |
| 87-89 | B+ | 3.33 |
| 84-86 | B | 3.0 |
| 80-83 | B- | 2.67 |
| 77-79 | C+ | 2.33 |
| 74-76 | C | 2.00 |
| 70-73 | C- | 1.67 |
| 67-69 | D+ | 1.33 |
| 64-66 | D | 1.00 |
| 60-63 | D- | 0.67 |
| N/A | INC | 0 |
| N/A | W | 0 |
| 60 or above | CR | 0 |
| 59 or below | NC | 0 |
| 70 or above | PASS | 0 |

Requirements

**Assignments:** All assignments (including projects, lab work, quizzes and exams) must be completed as scheduled. The following will apply to late assignments:

* 1-24 hours after due date = 20% off point value
* 25-48 hours after due date = 60% off point value
* 49+ hours after due date = No points given

If an assignment equals less than 5 points, no points will be given for late work. If there are extenuating circumstances, the student must submit a written explanation to the department Senior Instructor. Upon evaluation, points will be given according to the Senior Instructor’s discretion.

**Attendance:** Classes begin and end as indicated in the published schedule. It is required that students be present at the beginning of each class session and stay until class is dismissed, including lab periods. Excessive tardiness, leaving early and/or absences (from either lecture or lab sessions) are causes for dismissal from the course. A student that arrives in class beyond 30 minutes late may be considered absent. A student that leaves over 30 minutes before the end of class may also be considered absent. Excused absences will be determined by the instructors and approved by the Dean of Academics & Director of Student Services. Students may be removed from the course(s) based on the following absence guidelines:

*4 Unit Course* – Allowed 2 absences per 10-week MOD (3rd absence may be excused by DOA & DOSS)

*5 Unit Course* – Allowed 2 absences per 5-week MOD (3rd absence may be excused by DOA & DOSS)

*8 Unit Course* – Allowed 5 absences per 10-week MOD (6th absence may be excused by DOA & DOSS)

**Conduct:** Students are expected to conduct themselves in a professional manner while on campus. Rules of conduct are outlined in the University Catalog and students are required to adhere to such policies. Students who are in violation of the Student Code of Conduct Policy can be suspended.

**Student Academic Progression (SAP)**

**Graduate:** Student must maintain an accumulative GPA of 3.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student’s accumulative GPA will be reviewed after 4 future mods have been completed (must take punitive graded courses). Failure to meet the 3.0 GPA requirements will result in an Academic Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

**Undergraduate:** Student must maintain an accumulative GPA of 2.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student’s accumulative GPA will be reviewed after 2 future mods have been completed (must take a minimum of 8 credits per mod). Failure to meet the 2.0 GPA requirements will result in an Academic Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

**Suspension and Reinstatement:** If a student is suspended (SAP, plagiarism, code of conduct, etc.), the student must sit out one full MOD (currently 10 weeks for undergraduate level and 5 weeks for graduate level). The student will be required to submit a written reinstatement request, which will be reviewed by the Reinstatement Committee. The Reinstatement Committee will approve the request, deny the request, or request a meeting with the student for further consideration.

**Grades:** All grades listed will count as units attempted:

|  |  |  |
| --- | --- | --- |
| **Letter Grade** | **Percentage** | **Grade Points** |
|  |  |  |
| A | 94% - 100% | 4.00 |
| A- | 90% - 93% | 3.67 |
| B+ | 87% - 89% | 3.33 |
| B | 84% - 86% | 3.00 |
| B- | 80% - 83% | 2.67 |
| C+ | 77% - 79% | 2.33 |
| C | 74% - 76% | 2.00 |
| C- | 70% - 73% | 1.67 |
| D+ | 67% - 69% | 1.33 |
| D | 64% - 66% | 1.00 |
| D- | 60% - 63% | 0.67 |
| F | 0% - 59% | 0.00 |
| INC | N/A | 0.00 |
| W | N/A | 0.00 |
| CR | N/A | 0.00 |
| NC | N/A | 0.00 |
| PASS | N/A | 0.00 |

**Failed Courses:** If a student receives a FAIL grade, they may retake the course. The retake course will be charged at current tuition pricing. The student will be able to *replace* the previous FAIL grade with the grade received on the retake course.

**Drop Period & Refund:***Graduate*

|  |  |  |
| --- | --- | --- |
| **Sessions Attended** | **Refund** | **Grade Received When Dropping Course** |
| 0 | 100% | No Grade |
| 1 | 100% | No Grade |
| 2 | 80% | W |
| 3 | 70% | W |
| 4 | 60% | W |
| 5 | 50% | Grade Earned |
| 6 | 0% | Grade Earned |
| 7 | 0% | Grade Earned |
| 8 | 0% | Grade Earned |
| 9 | 0% | Grade Earned |
| 10 | 0% | Grade Earned |

*Undergraduate*

|  |  |  |
| --- | --- | --- |
| **Week In MOD** | **Refund** | **Grade Received When Dropping Course** |
| No Start | 100% | No Grade |
| 1 | 100% | No Grade |
| 2 | 80% | W |
| 3 | 70% | W |
| 4 | 60% | W |
| 5 | 50% | Grade Earned |
| 6 | 0% | Grade Earned |
| 7 | 0% | Grade Earned |
| 8 | 0% | Grade Earned |
| 9 | 0% | Grade Earned |
| 10 | 0% | Grade Earned |

Coleman University Policy on Academic Dishonesty:

Academic dishonesty is cause for dismissal from Coleman University. Presenting another person’s ideas, methods, course work, or test answers with the intention that they be taken as one’s own is theft of a special kind. It defrauds the originator of the work, the institution, its graduates, its students, and its future students.

The student has full responsibility for the authenticity of all academic work and examinations submitted. A student who appears to have violated this policy must submit to a hearing with the reporting instructor and the associate dean. If it is determined that a violation occurred, the matter will be referred to an Officer of the University with recommendations for an appropriate penalty. The student may be dismissed, suspended, or given another penalty.

Coleman University employs the plagiarism software known as Turnitin. Students are expected to use this tool in an appropriate manner with the sole purpose to support their own academic endeavors at Coleman University. Turnitin account information can not be shared with anyone. Contact your instructor if you have any questions about plagiarism related issues.

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator, Ariana Marron, at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students’ instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.