Course Syllabus

Course Title
Systems Analysis and Management

Semester
Spring 2012

Course Number
LIS453LE

Instructor
Kevin Trainor

Description
This is an introductory course in systems analysis for computer-based information systems. Systems analysts are primarily responsible for eliciting user requirements, proposing a systems solution that meets those requirements, and creating a model of the proposed solution that can be understood by both system users and system developers. Systems analysts also get involved in project identification, planning, management, and supervision of system construction. While this course will specifically emphasize systems analysis for LIS applications, the knowledge, tools and techniques that are covered in the course would be equally applicable to other disciplines. The audience for this course includes anyone who is interested in the analysis, design, acquisition or construction of computer-based information systems.

Required Texts

Required Articles


Course Topics
- Systems, Roles, and Development Methodologies
- Understanding and Modeling Organizational Systems
- Project Management
- The Impact of Stakeholder Diversity on Systems Analysis
- Business Process Modeling
- Information Gathering: Interactive Methods
- Information Gathering: Unobtrusive Methods
- Agile Modeling and Prototyping
- Using Data Flow Diagrams
- Analyzing Systems Using Data Dictionaries
- Process Specifications and Structured Decisions
- Object-Oriented Systems Analysis and Design Using UML
- Designing Effective Output
- Designing Effective Input
- Designing Databases
- Human-Computer Interaction
- Designing Accurate Data Entry Procedures
- Quality Assurance and Implementation

Course Objectives
- Identify the kinds of systems that are used in the LIS field.
- Understand how to identify and initiate a viable project.
- Plan, elicit and gather system requirements effectively.
- Suggest a design for an effective systems solution that meets the requirements.
- Create a model of the solution that can be used to get the informed approval of system users.
- Create a model of the solution that can be used either to construct a new information system or to serve as the basis for selecting a vendor-supplied information system.
- Understand the role of the systems analyst in supervising system specifications, construction, testing, and approval.
- Write a report that persuades system users, system funders, and the construction team that the system should be implemented as proposed.
Work Required of Students
Students will be expected to complete all reading assignments before class. All work on written assignments will be done independently by each student and submitted on or before the due date. Students will be expected to participate actively in class. This includes attending live sessions and participating in the chat and voice discussions. **Students will be expected to have a headset installed on their computer and to be prepared to speak at any time during class.** Students will also be expected to contribute, read, and respond to forum posts.

Each student will be assigned to a group that will act as a study group. Groups will meet during a portion of most of our live sessions. Additionally, forums will be created for each group so that members can exchange ideas and post drafts of their reports for comment. I encourage you to participate actively in your group and to seek support from the other members. You are not in competition with your classmates for a top grade. If everyone turns in work that merits an A+, then everyone will get an A+. So, it is in your interest to seek and provide support in your group.

Please note that the Class and Group Contribution component of your grade is substantial (15% of your final grade). So, please take these activities seriously. Activities that will be considered include:

- Chatting and speaking during class
- Volunteering to brief the class on one of the required readings
- Volunteering to show your skills practice assignment work during class
- Posting to forums (those for the entire class and those for individual groups)

Skills Practice Assignments
Systems analysis is an artful activity. To learn it, you must practice it. Skills practice assignments will be assigned following the class in which the skill is taught and demonstrated. These assignments will be your opportunity to practice the skills and get feedback about how well you are applying the technique.

Grading of these assignments will be based upon your demonstration of effort as well as your mastery of technique. In my experience, the most learning associated with these skills happens while you are trying to do the assignment and while you are reviewing the solutions that will be presented in class. So, giving the assignment a good faith try before the class starts is very important. Consequently, when grading these assignments, I will be giving substantial credit for handing in the assignment on time and demonstrating good faith effort. The grading rubric for these assignments is presented below:
<table>
<thead>
<tr>
<th>Demonstrated Effort and Technique</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully correct technique and on time</td>
<td>100</td>
</tr>
<tr>
<td>Substantially correct technique and on time</td>
<td>95</td>
</tr>
<tr>
<td>Good faith effort and on time</td>
<td>92</td>
</tr>
<tr>
<td>Substantially correct technique and late</td>
<td>88</td>
</tr>
<tr>
<td>Good faith effort and late</td>
<td>84</td>
</tr>
<tr>
<td>Work does not reflect good faith effort</td>
<td>70</td>
</tr>
<tr>
<td>Did not hand in assignment</td>
<td>59</td>
</tr>
</tbody>
</table>

Feedback on each of these skills practice assignments will come in two forms. Primary feedback will come on the day on which the assignment is due. During class, I will ask for brave volunteers to show their work. I will offer feedback and coaching on each of these examples during class and students will have the opportunity to ask questions, make comments, and generally clear up any misconceptions regarding the technique. After reviewing student solutions, I will present my solution to the exercise and we will discuss that as well.

The secondary form of feedback will be individual written comments that I make on your submissions and return to you. Due to the number of students in the class, you can expect to receive this feedback within approximately two to three weeks of handing in the assignment. With that delay in mind, please pay close attention to the solutions that we review in class.

**Student Project**
Each student will select, plan and execute an actual systems analysis project. Students will choose projects from their work, university, or community environment. The project should address some problem or opportunity that would benefit from a computer-based information system solution. I recommend that you choose a project about which you care very much. This will give you motivation to try new skills to reach your goal. We will discuss methods for choosing projects in class before you need to make your choice. Please remember that we will not be implementing these systems – we will just be doing the systems analysis. I am willing to work individually with students who are having difficulty identifying possible projects.

**Project Plan**
In order to complete your project by the end of the semester, you will need to commit to a project plan close to the time that we meet for our on-campus session. During the week prior to our on-campus session, students will be required to submit a draft of their project. During the on-campus session, time will be allotted for groups to meet and to provide coaching and feedback to each of the group members on their draft plan. Later that week, a final project plan document will be due. The contents of this plan should reflect any refinements that resulted from discussion with members of your group during the preceding week. The exact due dates for these items will be posted on the Moodle page for our class under the appropriate week.
Your project plan should follow an outline that I will publish separately. Following the outline will make it easier for me to give you full credit for your efforts when I grade the assignment.

**Project Report**

The project report presents the results of your systems analysis and design. It should be sufficiently persuasive to sell the project to the relevant project stakeholders. This includes the system users, potential project funders, and the construction team. It need not be excessively flashy. But, it does need to be persuasive. It should demonstrate to the stakeholders that you understand the requirements, have proposed an appealing solution, and have built a model of the solution that is adequate to turn over to the team that will construct the system.

Your project report should follow an outline that I will publish separately. Following the outline will make it easier for me to give you full credit for your efforts when I grade the assignment.

**Final Project Presentation**

At the end of the semester, each student will give a short presentation about their project during the final live session. The presentation will be a summary of the same information that is in the project report. Each student will be expected to provide a simple slide show to support their presentation. The time allotted for each presentation and the following question and answer period will be approximately 5 minutes. The primary purpose of the presentation is to share your work with your classmates. While members of your group will have seen drafts of your report and taken part in discussions of your work, this will be the only opportunity for the rest of the class to see the results of your efforts.

**Basis for Determining Grade**

The various components of student work will contribute to the final grade based upon the following percentages:

- Class and Group Contribution: 15%
- Skills practice assignments: 25%
- Draft project plan: 5%
- Final project plan: 15%
- Project report: 40%

Letter grades will be determined as follows:

- A+: 97 - 100%
- A : 93 - 96%
- A- : 90 - 92%
- B+: 87 - 89%
- B : 83 - 86%
- B- : 80 - 82%
• C+: 77 - 79%
• C: 73 - 76%
• C-: 70 - 72%
• D+: 67 - 69%
• D: 63 - 66%
• D-: 60 - 62%
• F: 0 - 59%

**Contact Hours**
This course will require approximately 45 contact hours.

**Last Revised**
2012-01-25