

IS 582: Information Systems Planning and Evaluation Spring 2009 Course Syllabus

Professor: **Dr. Dania Bilal**

Meeting Time: Monday, 1:25p.m.-4:25p.m.

Meeting Place: CBA 136

Office Location: COM 446

Office Hours: Monday 11:00a.m.-1:00p.m. Other time is available by appointment.

Voice Mail: (865) 974-3689

[E-mail: danial@utk.edu](mailto:danial@utk.edu)

[Web Page](#)

Catalog Description: Information systems used in libraries and information agencies. Emphasizes planning, evaluation and system implementation. Covers usability engineering, interface design, and human computer interaction.

Additional Course Description

This course introduces the information system concept with emphasis on systems used in various types of libraries and information agencies. Based on the systems analysis and design approach, the course covers system components, system development life cycle (SDLC), selection and evaluation of next generation ILS, and impact of technological advances on system development and meeting user needs.

Texts

Valacich, J.S., George, J.F., & Hoffer, J. A. 2006. *Essentials of Systems Analysis and Design*. 3rd. edition. Upper Saddle River, NJ: Prentice-Hall.

Barbara Schultz-Jones. 2006. *An Automation Primer for School Library Media Centers and Small Libraries*. Linworth Publishing.

Bilal, Dania. 2002. *Automating Media Centers and Small Libraries: A Microcomputer-Based Approach*. Westport, CT: Libraries Unlimited. [Copies of certain chapters will be placed on digital reserve, UT Hodges Library].

Additional Text

Bilal, Dania. 2009 (in progress). *Automating Media Centers and Small Libraries: A Systems Analysis and Design Approach*. Westport, CT: Libraries Unlimited. Copies of chapters will be made available upon completion.

Readings: Literature and web sources identified by the instructor.

Prerequisites

SIS students must have had a minimum of two out of the three required courses (IS 510, 520, 530). Students must have adequate computing skills, familiarity with web and social networking concepts, and Web navigation and Internet skills.

Course Objectives

Upon completion of the course, the student should be able to:

- become familiar with selected concepts related to library automation and information systems;
- identify and discuss the six phases of the system development life cycle (SDLC);
- discuss emerging technologies and trends in selecting automation software (e.g., open source, off-the-shelf);
- develop a feasibility study for selecting, upgrading, or migrating to a new automation software package for a specific information environment;
- gather and structure an ILS system requirements;
- discuss the system implementation process; and
- evaluate an information system using specific usability methods

Teaching and Course Delivery

This course combines theory and practice. It integrates collaborative learning, lectures, class discussions, hands-on activities, and field experiences. The course is offered on campus only and the delivery of the course is face-to-face.

Expectations

- Students are responsible for identifying libraries/information agencies close to their locations to complete specific projects identified by the instructor.
- Students should attend all class sessions. Absences must be cleared with the instructor in advance.
- Students should be in class on time. Late arrival should be cleared with the instructor in advance, if possible.
- Students who miss a class are responsible for obtaining class notes and other materials related to the course.
- Tests must be taken as scheduled.
- Projects and other assigned activities must be submitted on time.

Contacting the Instructor

Feel free to contact me for questions or to share ideas! You are encouraged to drop in during office hours, talk after class, set up an appointment if it is more convenient for you, or email me. To ensure quick response to your email, start your message subject line with IS 582. I will reply to your messages as soon as I can.

Submission of Assignments/Projects

Assignments and projects must be submitted in hard copy. Bring the hard copy to class on the due date. Paginate the assignment, give your name, and mailbox no. Online submission is allowed upon approval with the instructor. Projects and assignments must be word-processed, well-organized, and well-written.

Each late assignment will receive a reduced credit of one point per day, unless the instructor is informed in advance about this matter. Students should have legitimate reasons for late submissions.

Lecture Notes

Lecture notes will be available on the course Web page before class. Make sure you print the notes and bring them to class. The notes do not substitute for the assigned readings.

Special Needs

Contact the Office of Disability Services at 191 Hoskins Library at 865.974.6087 if you need course adaptations or accommodations. The office staff will work with you to arrive at the appropriate program and will register you for services needed. Please contact me about this matter to discuss appropriate solutions.

Readings and Class Participation

You are responsible for the assigned readings every week. In a professional environment you would be conversing with your colleagues. I expect a similar effort in this class. Class participation and keeping up with the readings is assigned 5% of the total grade.

Attendance

Attendance is expected because class discussions are an important part of mastering the content of the course. If you miss a class, notify the instructor as soon as possible. You are responsible for taking notes from your classmates about the class session you miss.

Evaluation	
<i>Students will be evaluated on the following:</i>	
Assignment 1: Literature review	15%
Assignment 2: System Development Life Cycle	15%
Tests (2)	10%
Project 1: Feasibility Study & Cost analysis	20%
Project 2: System Usability (team work)	20%
Field visit report	15%
Participation, readings, etc.	5%

Evaluation

The evaluation criteria of your work include but are not limited to: Quality of writing,

organization, amount of analysis and synthesis provided, demonstration of critical thinking skills, adherence to the guidelines, and submission on time.

Academic Integrity

"Study, preparation and presentation should involve at all times the student's own work, unless it has been clearly specified that work is to be a team effort. Academic integrity requires that all work presented be the student's own work, not only on tests, but in themes, papers, homework, and class presentation...Cheating, plagiarism, fabrication of data, providing unauthorized help, and other acts of academic dishonesty are abhorrent to the purposes for which the University exists" (Hilltopics).

Grading		
<i>Grading will be based on the following scores:</i>		
93 - 100	A	Excellent
87 - 92	B+	Very good
80 - 86	B	Good
75 - 79	C+	Satisfactory

Course Schedule			
<i>Date</i>	<i>Topic</i>	<i>Readings</i>	<i>Due</i>
Jan. 12	Course introduction Demo of Aleph system ; Demo of SUNLINK OPACs ; Demo of Z39.50 OPACs	Scan Valacich et al., chap. 1	None
Jan. 19	Martin Luther King Holiday - No class	None	None
Jan. 26	Concepts, Types of information system; components; ILS modules & functions SDLC Phase 1: Project planning	Valacich et al., chap. 1 Schultz-Jones, chap. 2	Identify institution to visit
Feb. 2	SDLC Phase 1: Project initiation & planning	Schultz-Jones, chaps. 6-7;Valacich et al.,	Discussion of readings

		chap. 3	
Feb 9	SDLC Phase 1 (cont'd.); SDLC Phase 2: System selection	Valacich et al., chap. 3	Assignment #1 Discussion of readings
Feb 16	Software & hardware considerations Other considerations	Schultz-Jones, chap. 9 Bilal (TBA)	Discussion of readings
Feb. 23	SDLC Phase 3: Systems analysis & system requirements	Valacich et al., chaps. 4-5	Test #1 Discussion of readings
March 2	SDLC Phase 3 cont'd.; DFDs	See Feb. 23	Draft checklist for field visit
March 9	SDLC Phase 4: System design	Valacich et al., scan chap. 8 Nielsen & Loranger, chaps. 4&5 Usability guidelines Usability First Usability reports ; Jakob Nielsen's site	Project #1 Discussion of readings
March 16	Field visit	None	None
March 23	Spring break - No class	None	None
March 30	SDLC Phase 5: System implementation	Valacich et al., Chap. 10 (scan) Schultz-Jones, chaps. 10-11	Field visit report Assignment #2 Discussion of field experience
April 6	SDLC Phase 5 (System 6: System Evaluation Usability materials	Bilal (TBA)	Discussion of readings
April 13	System migration Next generation ILS Standards and protocols	Bilal (TBA)	Test #2 Draft Outline for Project #2
April 20	Network architecture and topologies[Guest speaker]	Bilal, chap.7 Networking hardware	Discussion of readings

Project 2 due date: TBA .

Additional readings and websites will be added throughout the semester.

Assignments and Projects

Assignment 1: Literature Review -- Due on February 9.

A. Library Journal. Find the Automated System Marketplace article that appeared in [Library Journal, April 1, 2008](#). Do the following:

- Read the article.
- Briefly describe the major developments in library automation for 2008.
- If you were to select an automated system for a library of interest to you, what part(s) of the article would be most useful and why? Make sure you mention the type of library of interest to you.

B. Journal Articles. Do a literature search and find five articles published within the last two years in authoritative sources that would help you evaluate and select an integrated library automation system (ILS) for a library of your choice. The length of each article should exceed 3 pages.

- Give the full citation for each article and describe in one page how it contributes to your knowledge of the automation process (e.g., system evaluation, selection, implementation, and/or migration).

C. Blogs. Find information in one or two authoritative blogs (creator of each blog has adequate credentials).

- Give the citation of each block (creator, URL, blog name, date you accessed blog, etc.). Describe in one paragraph how the content and/or discussion of topics in each blog contributes to your knowledge of the automation process (e.g., system evaluation, selection, implementation, and/or migration).

Assignment 2: Data Flow Diagrams -- Due on March 30.

This assignment can be completed as a team or individually.

Select a major function of an automated system.

- Briefly describe the function and the processes it includes.
- Draw 3 DFDs based on the rules governing DFD diagramming for the selected function: Level-0 diagram, Level-1 diagram, and Level-N or Context diagram.

- Provide a description of the process in each of the diagrams that allows understanding of the composition of each diagram.
- In one paragraph, describe how using DFDs can help in structuring a system's requirements.

Project 1. Feasibility Study & Cost Estimate -- This project is being revised.

Objectives

- Perform a cost-benefit analysis for Recon at a hypothetical or real-world information environment.
- Select and justify a Recon option (e.g., outsourcing vs. in-house) that is convincing to your supervisor.

Overview: In this project, you will gain experience in communicating with Recon vendors and in gathering information about the cost of various Recon options and type of Recon services the vendors provide.

This project is a revised version from the one described in Bilal's Text, 2002.

Project Description

1. Identify and briefly describe an information agency of interest to you (e.g., special library, academic library, information center). The description should include the type of agency, its collection, clientele served, level of staffing, and financial resources/budget status. The information agency can be either hypothetical or real.
2. For this chosen agency, you have been asked to form a team who will look into cost estimates of record conversion into MARC21 format to build the cataloging database for the automated system under consideration. Your supervisor wants you to provide convincing evidence about the Recon option you will choose, especially in terms of cost effectiveness and efficiency. Therefore, you will have to examine various Recon options and determine the best option for your agency. To do so, you will need to contact Recon vendors to obtain the latest information about the cost of various Recon options and services provided so that you will be able to make the best decision to present to your supervisor.
3. Identify two Recon vendors that are suitable for your agency. (Typically, we use a minimum of three vendors. You will contact only two vendors for the purpose of this project).
4. Check the website of each vendor and find whether it contains the information you need about the cost of Recon options (full outsourcing, web-based Recon for in-house use, CD-ROM based Recon for in-house use, etc.) and services provided (e.g., enhancements, web-based, guidelines supplied for packing the shelflist, Recon specification form/template). If it does, collect this information.

5. Call the Recon vendors and speak with each company's Recon representative to collect data about the cost of Recon options and services provided. You will need to identify yourself as a graduate student working on a Recon project.
6. Ask about the various Recon options they provide and services. Obtain the cost for various options. Remember to include non-print materials, as applicable. Note that the representative may email or fax you the information requested.
7. Review the collected information and calculate the cost of Recon for both outsourcing and in-house. Refer to the exercise we did in class to ensure that you include the cost for all variables needed (e.g., barcodes, insurance). In addition, consult the cost analysis described in Bilal's Text.
8. Identify and describe the Recon option you have selected for your information agency and justify your option. Your supervisor needs to be convinced that your option is the best in terms of cost-effectiveness and efficiency. You may want to include evidence such as the return on investment, time that will be saved in completing the automation project, services that could be provided to users, among other things. *Remember the tangible and intangible cost-benefits you have learned in class. Can you integrate these to justify your option? Make sure you exhibit your problem solving skills, critical thinking, and arguments to impress your supervisor.*
9. Supply a list of references for sources used for this project. Include all correspondence received from each company representative, as applicable.
10. Reflect on your experience with this project including difficulties you have experienced, if any, knowledge gain, and any other insights you would like to share.

This project can be completed individually or as a team work.

Field Visit. Due on March 30.

Description: Visit a library or other information agency that has an integrated automated system in place. You may do this visit individually or in a group.

Guidelines:

- Make an appointment with the people you will be talking with in the library or information agency.
- Work with and/or view these modules in the system:
 - Opac features and capabilities.
 - Cataloging features and capabilities. Make sure you observe import of MARC records from a bibliographic utility or other sources into the cataloging module.
 - Circulation module features and capabilities.
 - Any other module you are interested in.
- Ask about the standards implemented or may be implemented in the near future (e.g., RFID).
- For **each module**, ask the person you talk with about:
 - likes
 - dislikes

- strengths, and
 - weaknesses of the module.
- Ask any person you talk with whether an RFP was developed by the library or information agency to purchase the system. If yes or no, ask for the reasons.
- You may ask any other questions you believe important and/or you are curious about.

Provide a written report about your field visit. Even if you had a group visit, provide your own report. Besides covering the areas listed above in the report, comment on the value of the visit to your automation knowledge.