

Management Information Systems in Libraries

ILS 542-70 / Spring 2002

COURSE SYLLABUS

Department of Information and Library Science
Southern Connecticut State University

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Course Title

Welcome to ILS 542, Management Information Systems in Libraries. I hope you enjoy this course.

In this course, we will touch upon basic principles and methodologies of MIS in libraries. The library system is changing. We will look at that change, examine trends, try to anticipate the future, and consider implications for our communities. And we'll try to remember that technology is not a goal in itself but rather a means to an end. Through this course, you should be able to describe the essential components of a system, recognize and describe the essential components and principles of management of information systems in libraries and information centers.

Course Description

Structure and components of management systems for library and information service providers and creators. Management information systems and packages for transaction processing and decision support; expert systems, artificial intelligence. Strategies for providing successful management information.

This course fulfills one of the requirements for the Information Systems/Technology Track, Master of Library Science degree at SCSU. Prerequisites: ILS 501 and 503; basic knowledge of computers. 3 credits.

Course Objectives

Through lectures, readings, discussion and course assignments/projects, the basic course objectives include the following:

1. Differentiate between the classes of management information systems;
2. Select information systems which support the organization's missions, goals, and objectives;
3. Identify, transform, and utilize existing transactions processing data for support of management decision making;
4. Evaluate new and changing technology as support tools for management;
5. Choose, implement, and utilize existing knowledge-based and artificial intelligence systems for particular libraries and information services;
6. Apply the principles of information's competitive advantage potentials to library and information industry settings.

Required Text and Readings

Required text:

O'Brien, James A. *Management Information Systems: Managing IT in the E-Business Enterprise*, 5th ed. Boston: Irwin McGraw-Hill, 2002. ISBN 0-07-250301-7.

Recommended texts:

Lancaster, F. Wilfred (Frederick Wilfred) & Beth Sandore. (1997). *Technology and Management in Library and Information Services*. Champaign, Ill.: University of Illinois Graduate School of Library and Information Science. ISBN: 0878450998.

Useful reading resources

Laudon, Kenneth C. and Jane Price Laudon. (2001). *Essentials of Management Information Systems: Transforming Business and Management*. Upper Saddle River, N.J.: Prentice Hall. ISBN 0130193232 [2000 year version also ok]

Osborne, Larry N. and Margaret Nakamura. (2000). *Systems Analysis for Librarians and Information Professionals*. 2nd ed. Englewood, Colo.: Libraries Unlimited. ISBN 156308693x.

Each Unit session has supplied a number of reading materials as helpful sources supporting the discussion topics. Students are encouraged to read these materials before Unit. Students are also encouraged to check online databases like LIBRARY LITERATURE, and the bibliographies in ARIST (Annual Review of Information Science and Technology).

There will be three categories of course assignments: readings, evaluations, and designs. There are also a number of readings, handouts and electronic documents recommended for this course. The assigned readings are listed in the handout titled "Course Outline."

Photocopies of some articles and/or readings are on reserve on the first floor of Buley Library. Most readings, however, can be retrieved from Internet resources.

CLASS METHOD:

The course will comprise a combination of lectures, discussions, and course projects that will enable students to more easily absorb course content. The principles will be introduced in lectures; practical reinforcement will go through assignments in which you create a multimedia information system.

Course Outline

Unit 1. Information and Information Systems

- Information technology in society: history, data, and programs
- Why information systems
- The changing management process
- Contemporary approaches to information systems
- The challenge of information systems

Unit 2. Information Technology and Information Processing

- What is a computer system?
- The CPU and primary/secondary storage
- The evolution of computer hardware
- Mainframes, mini/microcomputers, workstations and supercomputers
- Input and output devices
- Information technology trends

Unit 3. Information Systems in Library and Information Centers

- Content-based systems: reference, online sources, databases
- Inventory-based systems: cataloging, circulation, acquisitions, and serials
- Management support systems

Unit 4. Information Systems Software

- What is software
- Operating systems and systems software
- Application software
- How to choose software and programming languages

Unit 5. Managing Data Resources

- Organizing data in traditional file environment
- A modern database environment
- Designing databases
- Database trends
- Management requirements for database systems

Unit 6. The Strategic Role of Information Systems and Information Systems Organization

- Describing systems: vocabulary and symbols
- Major types of information systems
- Strategic information systems
- Implications for manager and organizations
- Organizations and information systems
- The changing role of information systems
- The role of managers in the organization

Unit 7. Telecommunications and the New Information Architecture

- The telecommunications revolution
- Types of telecommunications networks
- How libraries use telecommunications for competitive advantage
- Connectivity and standards

- Implementing the new information architecture

Unit 8. Building Successful Systems

- What are successful information systems?
- Solutions to software quality problems
- Managing system implementation

Unit 9. The Classes of Management Information Systems

- Transaction processing systems
- Management information systems
- Knowledge-based systems

Unit 10 Enhancing Management Decision Making

- Decision support systems (DSS)
- Group decision-support systems (GDSS)
- Executive support systems (ESS) (executive information systems)

Unit 11 Artificial Intelligence

- What is artificial intelligence?
- Knowledge-based expert systems
- Other intelligent techniques

Unit 12 Controlling Information Systems

- System vulnerability and abuse
- Controls
- Auditing information systems

Unit 13 Managing International Information Systems.

- The growth of international information systems
- Organizing international information systems
- Managing global systems
- Technology issues and opportunities

Unit 14 Ethical Issues and Future of Information Systems in Libraries

- Understanding ethical and social issues related to systems
- Ethics in an information society
- The moral dimensions of information systems
- Local information availability via computer networks
- Digital libraries and information systems

Unit 15 Project presentation week

Course Outline-Readings

Read before Unit:

Unit 1. Information and Information Systems

Laudon, Chapter 1
Lancaster, p. 1-13

Unit 2. Information Technology and Information Processing

Laudon, Chapter 2
Lancaster, p. 117-127

Unit 3. Information Systems in Library and Information Centers

Laudon, Chapter 3
Lancaster, p. 196-225 and p. 251-259
Osbourne, Larry N. and Margaret Nakamura. *Systems Analysis for Librarians and Information Professionals*. 2nd ed. Englewood, Colo., Libraries Unlimited, 2000.
Stueart, Robert D. and Moran, Barbara B. *Library Management*. 5th ed. Libraries Unlimited, 1998.

Unit 4. Information Systems Software

Laudon, Chapter 4
Lancaster, p. 128-160

Unit 5. Managing Data Resources

Laudon, Chapter 5
Lancaster, p. 47-54

Unit 6. The Strategic Role of Information Systems and Information Systems Organization

Laudon, Chapter 6

Unit 7. Telecommunications and the New Information Architecture

Laudon, Chapter 7
Lancaster, p. 173-195

Unit 8. Building Successful Systems

Laudon, Chapter 8

Unit 9. The Classes of Management Information Systems

Laudon, Chapter 9

Unit 10 Enhancing Management Decision Making

Laudon, Chapter 10

Unit 11 Artificial Intelligence

Laudon, Chapter 11
Lancaster, p 226-234

Unit 12 Controlling Information Systems

Laudon, Chapter 12

Unit 13 Managing International Information Systems.

Laudon, Chapter 13

Unit 14 Ethical Issues and Future of Information Systems in Libraries

Laudon, Chapter 14
Lancaster, p. 235-250
M. Alfino. 1997. Information ethics for librarians. McFarland & Co.

Course Assignments

You are expected to complete the following assignments on schedule and to be able to discuss/present them intelligently in class.

Contributions to final grade:

1. Assignments (25%)

To understand database management systems, which are the heart of all modern information systems, we will learn to use Microsoft Access. There will be a series of exercises to help you learn about relational dbms's and SQL.

- Build a database with tables Week 2
- Design and run a query Week 3
- Design a form Week 4
- Design a report Week 5
- A book-review assignment will be due in the eighth week of the class.

Students need to submit his/her book-review of recommendation for the class textbook in the area of MIS and evaluation of current knowledge on information system technologies employed in library settings.

2. Course Project (35%)

You will conduct a case study based on the material available on the Web. Case studies are based on material covered in the lectures and the readings, and involve simulated real-life situations. You work to culminate your project in a paper and create a written or web presentation to argue your solutions. You will show the results of the case study to the class. Evaluation is based on your coverage of the topic, your ability to generate and answer questions, and your skill to organize your arguments and/or solutions. [Example cases for the assignment will be distributed.]

Guideline of the projects:

Each student or group will conduct a course project of interest and write up a report (no more than 5 pages) to state why and how you conducted the project.

You will post both your final project and report to the Student Presentation section of unit 11.

Note: This assignment is not something that I expect you to worry about until later in the semester as we will need to get through a good bit of the material before you can decide what you wish to pursue. Also, the scope of the project should be such that it will fit into the last few weeks of the semester. Where common interests are evident, students may work together in a team for the project assignment.

Full credit will be given when the project as well as the report exhibits originality, creativity, clarity, and readability. All written submissions must be double spaced in size 12 Times Roman font.

3. Final Exam (15%)

This exam is designed to test your understanding of the theoretical aspects of the course. The exam will cover textbook material and focuses on the application of information systems and computer technology. The multiple choices and a combination of short-answer and short-essay questions (full essays) will be assigned based on the text, readings and lectures. [The midterm and final each will be 15% of you final grade. The midterm will be held on Mar. 11-14.] The final will be 15% of you final grade and will be held on Apr. 23-29.

4. Class Attendance and Participation in Threaded Discussions (15%)

Regular attendance in class is an important and required part of this course. Each student is expected to participate in weekly threaded discussions, as well as lead one threaded discussion unit. Such discussions will analyze, criticize and synthesize the readings, lectures and relevant experiences. Please inform the instructor if you will be unable to participate in class for an extended period (more than one week).

Grading Policies

Final letter grades will be based on total points accumulated through completion of these components. The distribution is

A+	98-100 points
A	94-97 points
A-	89-93 points
B+	84-88 points
B	79-83 points
B-	74-78 points

Students who earned a B- or lower will have to retake this course in order to satisfy the MLS requirements.

We will use a peer-review evaluation method to assist the process of grading.

Grading Procedures

1. Attendance/Participation Policy

The University requires a statement on course attendance policy. You are expected to attend classes and are responsible for all material covered in class. Absence without good cause is unacceptable and will affect the point totals outlined above.

In addition, attendance/participation grade also includes appraisals of:

- 1) Quality of participation (not just quantity!) in class discussion. Civility and good manners toward colleagues in class and in email communication are important. Too much quantity (i.e., domination of discussion) will work against a good appraisal.
- 2) The difficulty and creativity of the course project will be considered in the participation component. Students who attempt an especially challenging or new (to them) project will be given more credit than a colleague who elects to pursue a safer, perhaps easier project.
- 3) Email communication of your evaluation includes posting, timing, accuracy and format of electronic files.

You must have a working email address and keep the instructor apprised to that address.

You should share relevant or interesting information you find with the class by posting on the class list.

When you complete an exercise, you can send your paper/project/report to liuy1@owl.southernct.edu. In addition, you are also encouraged to post the paper/project/report to the class listserv.

Projects, assignments and presentations are due at the assigned time. The value of a late project or exercise will be reduced by one point per day. The safest practice is to turn in projects, exercises and papers on the date they are due.

2. Extra points for wizards

A number of students enrolled in this class may have had extensive prior experience with the projects and exercises. These folks know a great deal and can be a great resource to the class and the other students in the class.

Wizards can earn extra points by lending their expertise, knowledge, skills and abilities to the class by assisting others who are struggling with their exercises and projects. Students receiving this assistance are encouraged to inform the instructor (liuy1@owl.southernct.edu) by way of email or by other (more primitive) communication technology when they receive this help. If you receive help from a colleague, please let me know.

3. Format for Papers

If you use tree-based media to turn in assignments, papers, and exercises:

- All written submissions must be double spaced in size 12 Times Roman font.
- Put your name, course number and title of project, and date at the top right of the first page of each paper-based exercise, like the format in the example below:

Your name
ILS 542 Issue paper
Date

For electronically submitted papers: All electronically submitted papers must have your name, the course number and the exercise name in the subject line. If the subject line does not grab the instructor's attention, it could be inadvertently excised.

If you send the instructor email asking about a project, it could be expeditious to include mention of that fact in the subject line as well.

Evaluation Criteria

Expectation: This is a graduate level course, and graduate level performance is expected to demonstrate in assignments, projects and presentations. Recycled materials from other classes or "seat of trousers" projects are not acceptable.

An A project does not just fulfill the assignment: it has something original and important to say, and the points it makes are supported well. It is organized effectively, develops smoothly and is written clearly.

A B paper fulfills the assignment well: its general idea is clear, and it is effectively presented. It handles its sources well, with no serious errors of fact or interpretation. Its content, however, may not be very original, agreeing with accepted views without adding anything new, or it may be original but fail to offer sufficient support for the points made. It is based on adequate and appropriate data or literature, and refers to it when points need support.

A C paper is adequate to fulfill the assignment, and its general idea is clear. Its content may be repetitive or oversimplified, refusing to acknowledge complexity or failing to cover important points. Points may be hard to follow, and the paper may be poorly organized (e.g., literature reviews that summarize what one source after another has to say, instead of making general points supported by reference to a selection of sources). There may be a serious error of fact or interpretation. Sources or data may be poorly chosen--insufficient in number, of inappropriate types, too old, lacking in authority, etc.

An F paper does not fulfill the assignment: it does not do what was required. It may fail to focus on a single topic or subject. It may omit large amounts of data or material lying within its declared scope, or make repeated errors of fact or interpretation. Plagiarism (use of material without giving credit to the source) will result in an F.

General Policies

The prerequisite for this course is a basic undergraduate or graduate-level computer literacy course such as CS101 and information science course such as ILS501. Alternatively, students with extensive experience working with information technologies and systems may elect to waive this prerequisite.

We assume that all students admitted to ILS 542 will have

- An understanding of the concepts underlying computer-based technologies
- Familiarity with the associated vocabulary
- Ability to use a computer in a work setting
- Experience in library automation system

We also assume that all students have

- Access to an email account
- Ability to navigate the Internet, use URLs and the like
- Interpret process of information retrieval

While it is not necessary to be a trained technician, simple use of a PC for word processing or

surfing the internet is normally not sufficient preparation for ILS 542.

Course Requirements

The course requirements include the following:

- Readings
- Satisfactory completion of class activities
- Satisfactory completion of all course assignments/presentations, demonstrating graduate level work and proficiency.
- Abilities using electronic communication and Internet systems

Integrity of scholarly work

The School of Graduate Studies and the Department of Information and Library Science expects high standards of ethical behavior on the part of all persons involved in research and other scholarly work. Students are required to demonstrate honesty and integrity in all scholarly activity. Students are reminded that areas of misconduct in scholarship include, but are not limited to, the following:

Falsification of data, which ranges from sheer fabrication to selective reporting, including the omission of data.

Plagiarism, which involves taking and using as one's own the writing and/or ideas of another and ranges from outright stealing to inadequate attribution. The University and ILS have specific policies regarding plagiarism <http://www.southernct.edu/departments/ils/plag.html>. Please be aware of them.

Academic Integrity, which is expected that you will behave in an honorable and respectful way as you learn and share ideas. Therefore, recycled papers, work submitted to other courses, and major assistance in preparation of assignments without identifying and acknowledging such assistance will not be tolerated. Please consult with me if you are in doubt regarding ethical academic behavior. Please be familiar with the ILS Statement on Academic Integrity <http://www.southernct.edu/departments/ils/plag.html> and the department's policy on inappropriate behavior in electronic communications <http://www.southernct.edu/departments/ils/olpolicy.html>.

Violations of rules to protect patients, research subjects, and other persons and animals, which, while not fraudulent in the traditional sense, are unethical and undermine the integrity of the academic process.

The use of commercial organizations or paid individuals to write all or part of the thesis.

Violations of the requirement for integrity of scholarship shall result in a failing grade and dismissal from the Graduate School.

Access to Databases

Access to Databases through Buley Library (SCSU), including CONSULS and iConn.

The following Link will bring you to the Buley Library at SCSU. Once linked, you will be able to choose which databases you would like to use. Buley Library Link. The Buley Library homepage has a link to Consuls. Note that there are several "pull down menus" available. The menus offer, among other databases, a link to "iConn", the Connecticut Digital Library. As a student of CSU/SCSU, you have access to that database. Once the iConn page opens, click on "Resources for Colleges". A window with the databases will open. Click on "Access from Library/School". You will then get the screen prompt for your access information.

Contact information:

Office hours:

Tuesday 10 am-12 pm

Wednesday Tuesday 10 am-12 pm

Thursday 3-5 pm

In-person mentoring/coaching is very welcome but please make an appointment by phone or email.

Instructor information:

Yan Liu, Ph.D. [Prof. Liu]

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501 Crescent Street

New Haven, Connecticut 06515 - 1355

(203) 392-5763 (voice)

(203) 392-5780 (fax)

Email: liuy1@.scsu.ctstateu

Campus information

Department web page with links to:

<http://www.southernct.edu/departments/ils/>

Disabilities office
Special Needs

If you have a disability or any limitations or if there are things that I can do to facilitate the learning process, please let me know as soon as possible.

Disability Resource Office
Southern Connecticut State University
Engleman 15
501 Crescent St.
New Haven, CT 06515
Telephone: 203-392-6828
Fax: 203-392-6829
TTY: 203-392-6131

SCSU weather telephone number (392 – SNOW/392 – 7669)