The Catholic University of America
School of Library and Information Science
LSC 555 – Information Systems in Library and Information Centers
Spring 2012

Credit Hours: 3

Prerequisites: No course prerequisites but see Basic Skills Needed, below.

Meetings

This is class meets primarily face-to-face (f2f), with exceptions noted in the schedule. The class meets on Mondays, 4:10-6:40pm, in Pangborn 302.

Regular online participation is expected. We will use CUA’s BlackBoard learning management system extensively for announcements, discussion, assignments, etc. Students are expected to monitor BlackBoard frequently, because updates, administrative information and reminders are frequently posted there.

Instructor Contact Information
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kules@cua.edu
http://faculty.cua.edu/kules/
Office hours are posted on my web page.

Description

This course introduces students to the evolving role of information systems in the storage and retrieval of information. Students explore how information technology in libraries, archives and information centers, and on the World Wide Web facilitates interaction with information.

Course Goals

This course is designed to:

- Introduce students to applicable theory, principles, and standards;
- Explore the capabilities and functions of several classes of information systems, including established technology like Integrated Library Systems and databases as well as evolving social and collaborative environments;
- Introduce essential technology elements (hardware, software, networking, etc.);
- Introduce practical information technology skills used by information professionals, such as working with databases and creating and publishing web pages; and
- Promote critical thinking, problem solving and collaborative teamwork abilities for working with information technology.
Goals for Student Learning
At the conclusion of this course, students will be able to:

1. Explain the role and functions of computer-based information systems in libraries or information centers or on the web.
2. Describe fundamental computer and communications technology principles and trends applicable to libraries, archives or other information centers.
3. Describe important human and technological issues in the electronic environment.
4. Employ systems analysis and human-computer interaction frameworks to analyze the design and operation of information systems in libraries or information centers or on the web.
5. Demonstrate basic skills in selected current technologies (such as database management systems (DBMS), HTML, wikis, or blogs) to organize and disseminate information.
6. Articulate the importance of, and strategies for, professional development and continuous learning about information technology in LIS.

Instructional Methods
This course uses a variety of instructional methods and activities:

- Lecture and discussion based on the readings. These will be both face-to-face and online, and can involve new forms of online dialog like blogs.
- Small group discussions and paired critiques of work products.
- Hands-on exercises for skills development.
- A team project, including student presentation and critique.
- Collaborative learning - You will learn from each other by sharing experiences, knowledge and skills.
- Feedback to and from the instructor. In-class and online feedback is an integral part of the learning and assessment process for both the student and the instructor.
- Classes are recorded (on a best-effort basis) and posted to BlackBoard for review.

These course activities will be conducted both face-to-face (in-class) and online (using BlackBoard, wiki, and other tools). Students are expected to be online frequently. If you do not have daily access to the Internet, please contact the instructor before the first class meeting.

Students should be aware that CPIT conducts routine system maintenance each Thursday, 7:00 am - 9:00am, and the third Sunday of the month, 7:00am - 2:00 pm. During these times, BlackBoard and other systems may not be available. Students should plan accordingly.

Course Structure
There are four broad modules of the course. The Frameworks module focuses on two ways of thinking about information systems. We will use these as touchstones throughout the course. The Information Systems module investigates selected information systems that are relevant to the LIS field and LIS professionals. The Building Blocks module covers important components of any information system. In the final module, we wrap up the course, with project presentations, course review, etc.:
**Framework** - Two important ways that we think about and analyze information systems.

**Information Systems** - Selected information systems to be investigated in this course.

**Building Blocks** - Essential technology elements of all information systems

**Wrap-Up**

**Cross-cutting themes**

In addition to the topics listed below, there are several themes that we will cover over the course of the semester. These include:

- Hands-on skills
- Technology trends
- Ethical issues

**Course Schedule**

This schedule provides approximate dates for topics and major assignments. Detailed information, including weekly activities, exercises, and specific due dates, will be posted to BlackBoard, and takes precedence over this schedule. The schedule and syllabus are subject to change as needed. Any changes will be posted in BlackBoard.

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Module</th>
<th>Topics</th>
<th>Major assignments (approximate dates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Jan 16-22</td>
<td>Framework</td>
<td>Human-Computer Interaction, Users &amp; usability. Online week: No F2F meeting due to Rev. Martin Luther King, Jr. Day Holiday</td>
<td>HW1: Heuristic analysis</td>
</tr>
<tr>
<td>3</td>
<td>Jan 23-29</td>
<td>Information Systems</td>
<td>Digital Libraries &amp; Archives.</td>
<td>Form project teams and submit proposals</td>
</tr>
<tr>
<td>4</td>
<td>Jan 30-Feb 5</td>
<td>Information Systems</td>
<td>Information Retrieval Systems.</td>
<td>HW2: Information systems; create web page</td>
</tr>
<tr>
<td>6</td>
<td>Feb 13-</td>
<td>Framework</td>
<td>Systems development lifecycle.</td>
<td></td>
</tr>
<tr>
<td>Day</td>
<td>Date</td>
<td>Topic</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>-----</td>
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<td>--------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Feb 20-26</td>
<td>Building Blocks</td>
<td>Systems analysis. User-centered design.</td>
<td>HW3: Usability test</td>
</tr>
<tr>
<td>8</td>
<td>Feb 27-Mar 4</td>
<td>Framework</td>
<td>Representation &amp; management of information: Files, databases, SQL</td>
<td>Project checkpoint 1</td>
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<td></td>
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<td><strong>We do not meet on Tuesday, Feb 21 even though it is an administrative Monday</strong></td>
<td></td>
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<tr>
<td></td>
<td>Mar 5-11</td>
<td></td>
<td><strong>Spring Break</strong></td>
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<tr>
<td>10</td>
<td>Mar 19-25</td>
<td></td>
<td>Telecommunications &amp; networking</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mar 26-Apr 1</td>
<td>Building Blocks</td>
<td>Representation &amp; management of information: metadata</td>
<td>Project checkpoint 2</td>
</tr>
<tr>
<td>12</td>
<td>Apr 2-15</td>
<td>Information Systems</td>
<td>The Social Web 2.0: Wikis, blogs and more.</td>
<td><strong>Easter Break - Apr 5-9</strong></td>
</tr>
<tr>
<td>13</td>
<td>Apr 16-22</td>
<td>Wrap-up</td>
<td>Social Issues in IT. Prepare team project presentations.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Apr 23-29</td>
<td>Wrap-up</td>
<td>Team project presentations. Course evaluations</td>
<td>Oral presentations due in class</td>
</tr>
<tr>
<td>15</td>
<td>Apr 30</td>
<td></td>
<td></td>
<td>Final assignment</td>
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</tbody>
</table>

**Required Course Text**

No required text.

**Optional Course Texts**

Castro, E. (2007) *HTML, XHTML & CSS. 6th Ed.* Berkeley, CA: Peach Pitt Press. *Several students have highly recommended this book. A straightforward, building block (the author’s words) approach to HTML. Very visual. This text is also currently the text for LSC 610.*

*Although this text is somewhat outdated, it covers some material specific to libraries.*

**Required Technologies**

The following technologies are taught as an essential part of this course or required for course delivery:

- Basic HTML
- Publishing a web page to the CUA Personal Web Site
- Use of a wiki for shared content development and collaborative activity
- Exploration of relational database concepts using Microsoft Access

**Reading Materials**

Readings are drawn primarily from these materials. Specific reading assignments are provided for each week in BlackBoard. For your convenience, hyperlinks are provided to documents available on the open web. Although I try to keep these links current, there are no guarantees - links change and do break, and you may need to use a web search engine to locate the readings or locate them in ALADIN. Readings without hyperlinks are available from ALADIN except where noted.

**Introductions**

- This [syllabus](#) - topics, assignments, schedule, Basic Skills Needed, and course policies.
- [Getting started with BlackBoard](#)
- [SLIS Technology Home Page](#)
- [CPIT Getting Started](#)

**Information and Systems**


**HTML**

- Infopeople Project. [Introduction to HTML](#).
- W3Schools.org. [HTML Tutorial](#)
Human-computer Interaction. Users and Usability

- B. Tognazinni (2003). First principles of interaction design. Ask TOG.

Digital Libraries and Archives


Information Retrieval Systems

- Power searching for anyone: http://searchenginewatch.com/2156031
- Basic search tools chart: http://www.infopeople.org/search/chart.html
- The Seven ages of information retrieval: http://archive.ifla.org/V1/5/op/udtop5/udtop5.htm

Integrated Library Systems
• D. Lorcan (2005). "The integrated library system that isn't" OCLC blog.
• M. Deddins (2002). "Overview of ILS" EDUCAUSE
• Koha Open Source ILS koha.com
• Sai Deng. (2010) Beyond the OPAC: creating different interfaces for specialized collections in an ILS system. OCLC Systems & Services, 26(4) pp.253 – 262

Electronic Record Management Systems


Systems Librarianship


Systems development lifecycle. Systems Analysis. User-Centered Design


**Systems Analysis. Charts and diagrams**

- From Wikipedia: Flowchart
- Flow Charts, Mind Tools Ltd
- Data flow diagram wikipedia.org
- Wikipedia, Entity-relationship model
- Sauter, V. *Entity-Relationship Diagrams (ERD)*

**Computer Systems: Hardware, software & storage**

- From WikiPedia: Computer Hardware, Data Storage
- From WikiPedia: Computer Software, Software Licensing
- The Open Source Initiative's Home page and Open Source definition

**Telecommunications and Networking**

- Internet Pioneers
- How the internet infrastructure works, by Jeff Tyson.
- Telecommunication and networking - Wikipedia excerpts
- From WikiPedia: Telecommunications, Cloud computing
- AHK and Assoc. (2002). Download Speeds and Conversion Table
- B. Mitchell. What is Wireless Networking? about.com
- B. Mitchell. Wired vs Wireless Networking about.com

**Representation & management of information: metadata**


**XML and RSS**

- W3Schools.com, in "XML Tutorial": *Introduction to XML*, *How can XML be used?*, and *XML Tree*.

**Representation & management of information: Files, databases, SQL.**

- Database Tutorial dot@mac
- P. Tero (2004). "Introduction to Databases" *Digital Web Magazine*
- MS-Access Tutorial
- SQL Tutorial W3Schools.com

**Web 2.0**

- *Web 2.0*, by Jeff Utecht (5 min. video)
- *Web 2.0... The machine is us/using us*, by Michael Wesch (5 min. video)
- *A Vision of Students Today* (5 min. video)
- *A Vision of K-12 Students Today* (4 min. video)

**Social Issues**

- Clifford, S. *Many See Privacy on Web as Big Issue, Survey Says*, New York Times, March 15, 2009. - Describes the sometimes contradictory attitudes and behaviors that consumers have about online privacy.
- Selected readings from the Social Issues section of our Social issues and technology trends wiki page (TBA)
Technology Trends

- G. Anthes (2007). *Spam, viruses, botnets: Can the Internet be saved?* Computerworld - Discusses a number of technical challenges facing the Internet, some related social aspects of those challenges, and describes several research projects that are targeted to address the challenges.
- Selected readings from the Technology Trends section of our Social issues and technology trends wiki page (TBA)

Libraries

The CUA Libraries' wide range of resources and services, including databases, online journals, and FAQs are on the main web site. For assistance on papers and assignments, consult the research guides or schedule an appointment with a subject librarian.

COURSE REQUIREMENTS AND ASSESSMENT

Basic Skills Needed

Although there are no course prerequisites for this class, you will need to have a basic set of skills to succeed. For example, you must be able to:

- Navigate the web and conduct basic web searches. Save a web page to local computer. Access a web page by entering its URL directly into the web browser.
- Use basic features of Windows XP, such as the Start menu and other program menus, cut-and-paste, moving files between folders and external media like a USB drive.
- Log in to the CUA network (via Windows XP) and the Home@CUA web-based system.
- Send and receive email using the CUA email system.
- Use ALADIN to find books and articles
- Access this course on BlackBoard, view this syllabus and related information available, and post a personal introduction on the discussion forum.
- Post to a web-based discussion forum.
- Create a Microsoft Word or PowerPoint document and apply basic formatting such as fonts, font sizes and color.

You also need regular access to the Internet (i.e., at least every other day).

If you do not feel confident of your mastery of these skills, don’t panic. Instead, contact me
before the course starts. I can help you find resources to fill in any gaps early in the semester.

SLIS provides short workshops on technology topics throughout the semester. See the SLIS Technology Resources page for more information.

## Grading

Grades for this course will be based upon the following elements (subject to minor adjustments):

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Participation (includes f2f sessions, online discussions, exercise completion, etc.)</td>
<td>20%</td>
</tr>
<tr>
<td>HW1</td>
<td>15</td>
</tr>
<tr>
<td>HW2</td>
<td>15</td>
</tr>
<tr>
<td>HW3</td>
<td>15</td>
</tr>
<tr>
<td>Team Project - checkpoint 1</td>
<td>5</td>
</tr>
<tr>
<td>Team Project - checkpoint 2</td>
<td>10</td>
</tr>
<tr>
<td>Team Project - oral &amp; written report</td>
<td>10</td>
</tr>
<tr>
<td>Final Assignment</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Final grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Numeric range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-93.99</td>
</tr>
<tr>
<td>B+</td>
<td>86-89.99</td>
</tr>
<tr>
<td>B</td>
<td>82-85.99</td>
</tr>
<tr>
<td>B-</td>
<td>78-81.99</td>
</tr>
<tr>
<td>C</td>
<td>70-77.99</td>
</tr>
<tr>
<td>F</td>
<td>Below 70</td>
</tr>
</tbody>
</table>

University grades: The University grading system is available at [http://policies.cua.edu/academicundergrad/gradesfull.cfm#II](http://policies.cua.edu/academicundergrad/gradesfull.cfm#II) for undergraduates and [http://policies.cua.edu/academicgrad//gradesfull.cfm#iii](http://policies.cua.edu/academicgrad//gradesfull.cfm#iii) for graduate students. Reports of grades in courses are available at the end of each term on [http://cardinalstation.cua.edu](http://cardinalstation.cua.edu).

## Class Participation - In class and online

Class participation includes face-to-face sessions, online discussions, exercise completion, etc. Each class is critical to your learning experience. Your energy in contributing to class discussions, small-group exercises, and online activities and discussions will be important. Therefore, arriving at class on time and prepared (e.g., reading all course readings before class, working on project research, etc.) and actively participating will be necessary to receive full credit for class participation. The readings are intended to stimulate questions in addition to providing information. It is a good strategy to make notes of questions and comments as you
read - these can be useful contributions to the discussion.

Exercises and other activities are provided to help you learn and practice course material, especially specific techniques or tools. We will often start an exercise in class and have you finish afterwards. Although they are not formally graded, they contribute to your participation grade - you are expected to complete them and post your results, comments, etc. as instructed.

**Homework**

Each homework assignment will incorporate the topics being covered and selected technology skills. The assignments often have a collaborative in-class component, and an individual at-home component. Assignments may span multiple weeks. In class, you will sometimes work in small groups to discuss the assignment and critique each other's work.

Before posting or submitting your work, you must test your work using a PC and Internet Explorer 7. If you do not have access to a PC, you can use one in the lab.

All assignments must be posted or submitted by 11:59 pm on the day they are due, unless otherwise noted. If the assignment is submitted late, your grade will be reduced by 10%. Each day it is late thereafter you will lose an additional 5% point (e.g., submitting one day late would reduce your grade by 15%).

**Team Project & Presentation**

For the team project, you will partner with at least one other person in the class to conduct an in-depth case study of a real organization's information system. Working with a larger group allows you to undertake a more ambitious and rewarding project. You will gain experience working on a technology project in a group - which is a real-world requirement for most jobs. You group will present its work during the last two class sessions. Each member of your team will present part of the oral presentation.

Each project checkpoint and the final report must be submitted by 11:59 pm on the due date unless specified otherwise. If it is not submitted on time that day, your grade will be reduced by 10%. For each subsequent day it is late your grade will be reduced by 5%.

**Final Assignment**

The final assignment is an opportunity for you to synthesize and apply what you have been learning in this course. For your final assignment, you will write 2 short essays (similar to comprehensive exam questions) and prepare a final version of your web portfolio. Throughout the course, you will post your assignments and other work products to a personal or team web
By the end of the course, you will have a portfolio that illustrates the knowledge and skills you have developed during the course.

**Submitting Assignments**

All assignments are to be submitted electronically through the BlackBoard Learning Management System or posted online as instructed, except where noted.

Late work. The instructor will not accept late work except by prior arrangement. If accepted, it may not be graded until the end of the term.

Makeup work. If a student has a legitimate reason, such as a medical or family emergency, the instructor may allow a student to do makeup work. The amount and nature of the work is up to the instructor's discretion. It will be graded at term's end. Documentation of the emergency (e.g. a doctor's letter) may be required.

Place your name and email address at the top of all pages. Any work submitted with numerous grammar, spelling or format problems will be penalized.

Accommodations for students with disabilities: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructor privately to discuss specific needs. Please contact Disability Support Services (at 202 319-5211, room 207 Pryzbyla Center) to coordinate reasonable accommodations for students with documented disabilities. To read about the services and policies, please visit the website: [http://disabilitysupport.cua.edu](http://disabilitysupport.cua.edu). The CUA guide for services and accommodations for students with disabilities can be found at [http://counsel.cua.edu/ADA/publications/disbro/contents.cfm](http://counsel.cua.edu/ADA/publications/disbro/contents.cfm). Some basic guidelines and links to other information may be found at: [http://counsel.cua.edu/ADA/clicks/](http://counsel.cua.edu/ADA/clicks/).

**University Grades**

The University grading system is available at [http://policies.cua.edu/academicundergrad/gradesfull.cfm#II](http://policies.cua.edu/academicundergrad/gradesfull.cfm#II) for undergraduates and [http://policies.cua.edu/academicgrad//gradesfull.cfm#iii](http://policies.cua.edu/academicgrad//gradesfull.cfm#iii) for graduate students. Reports of grades in courses are available at the end of each term on [http://cardinalstation.cua.edu](http://cardinalstation.cua.edu).

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Academic honesty is expected of all CUA students. Faculty are required to initiate the imposition of sanctions when they find violations of academic honesty, such as plagiarism, improper use of a student's own work, cheating, and fabrication. The following sanctions are presented in the University procedures related to Student Academic Dishonesty (from http://policies.cua.edu/academicundergrad/integrityprocedures.cfm): "The presumed sanction for undergraduate students for academic dishonesty will be failure for the course. There may be circumstances, however, where, perhaps because of an undergraduate student's past record, a more serious sanction, such as suspension or expulsion, would be appropriate. In the context of graduate studies, the expectations for academic honesty are greater, and therefore the presumed sanction for dishonesty is likely to be more severe, e.g., expulsion. ...In the more unusual case, mitigating circumstances may exist that would warrant a lesser sanction than the presumed sanction." Please review the complete texts of the University policy and procedures regarding Student Academic Dishonesty, including requirements for appeals, at http://policies.cua.edu/academicundergrad/integrity.cfm and http://policies.cua.edu/academicundergrad/integrity.cfm.

Plagiarism will not be tolerated. Always cite your sources.

**Participation and Conduct:**

Attendance is required, in keeping with university policy. Any non-emergency absences must be approved by the instructor before the first class of the semester. Your class participation grade depends on being in class and actively participating in class and online. Arrive on time. Late arrival will affect your class participation grades.

If class is cancelled due to weather, illness or other emergency, check the online announcements the next day. We will generally hold class online when this happens.

Behave respectfully. Students are expected to behave respectfully at all times: while in class, in public discussion forums, and when using email. Participation grades will reflect a student’s maturity level and professionalism; cooperation and collaboration with the class; and whether the meaningfully contributes to course discussions.

No phone calls during class. Turn off or silence cell phones and pagers. Students leaving the room for calls may not be allowed to return to that class session.

No grade discussions in class. Instructor will not discuss grades in class. First consider why the instructor deducted points. If you still disagree, explain your disagreement in an e-mail to the instructor.

**Accommodations for students with disabilities**

Any student who feels s/he may need an accommodation based on the impact of a disability
should contact the instructor privately to discuss specific needs. Please contact Disability Support Services (at 202 319-5211, room 207 Pryzybyla Center) to coordinate reasonable accommodations for students with documented disabilities. To read about the services and policies, please visit the website: http://disabilitysupport.cua.edu.

**H1N1 Influenza Preparedness Plan**

Students are encouraged to visit the University's H1N1 & Seasonal Flu Information web page (http://health.cua.edu/flu.cfm) for information on prevention and flu shots (all students are eligible and the University encourages everyone to get vaccinated). If you become sick, please complete the online reporting form at the Seasonal Flu and H1N1 Self-Reporting Center (https://secure.cua.edu/health/seasonal-flu.cfm). This initiates several campus supports, including notification of your instructors. Campus security (http://www.cua.edu/safety/) provides daily updates on the status of influenza on campus and the University response to the anticipated H1N1 outbreak.

If students have an excused absence due to illness, the following steps will be taken:

1. Because much of the coursework is done online and asynchronously, any coursework that can be completed individually (i.e. non-group work) will have the deadline extended.
2. If a student is unable to complete an online group activity on time, the activity will be revised to provide an appropriate individual activity, albeit without the group work aspect.
3. If a student misses a face-to-face session, s/he will view the class slides, listen to the recorded audio, and respond to a set of written questions provided by the instructor.
4. If a student misses a substantial part of the team project, they will be provided an alternative assignment for the portion(s) of the project missed. Their grade will be prorated based on the group work completed on the project and their individual work.

If class is canceled due to illness (as well as weather or other emergency), students will be notified via the BlackBoard Announcements, with the Announcement emailed to students' CardinalMail addresses. In this case, students should check the online announcements the next day. We will generally hold class online when this happens. Particular Activities that cannot be conducted online will be postponed.

If the instructor is unable to lead class for an extended period due to illness, an alternate instructor will take over during the illness.

This course plan is consistent with the SLIS H1N1 Influenza Preparedness Plan, adopted September, 2009 and available at http://slis.cua.edu/forms/.

_Syllabus changes_
The instructor reserves the right to make changes to this syllabus as needed. Nothing in this syllabus may be construed as a contract. All changes will be provided to students via BlackBoard.

### Acknowledgements

This syllabus was originally adapted from material by David Shumaker and Allison Druin.

### Revision History