LIS-654
INFORMATION TECHNOLOGIES

Pratt SILS

Term:	Spring 2015
Time & Location:	Tuesday 11:30am-2:20pm (654-01) / Tuesday 6:30pm-9:20pm (654-02)
	Pratt Manhattan Center, Lab 606
Instructor Information:	Monica Maceli, Ph.D.
	Pratt Manhattan Center, Room 604c
	mmaceli@pratt.edu	www.monicamaceli.com
Credits:	3.0
Pre-requisites:	None
Office Hours:	Tuesdays 3-5pm or by appointment

1) BULLETIN DESCRIPTION

This course introduces the fundamental concepts of computing and networking, with an emphasis on the role these technologies play in creating, manipulating, storing, and accessing information. Topics essential to the work done by information professionals will be highlighted: web technologies, database concepts, markup languages, data management, and design and accessibility. Students will conduct frequent hands-on activities to acquire skills that are immediately applicable to working with information technologies. The course will explore recent trends in technology within information organizations, preparing students for their roles as information professionals and providing the foundation for future technology-related coursework.

2) COURSE GOALS & OBJECTIVES

The goals of this course are to:
- Introduce fundamental concepts of information technology infrastructure, internet, and web design principles
- Develop a general understanding of the information technologies used for creating, managing, storing, and accessing information
- Understand contemporary issues and trends in the development and changes of information technologies and their impact on information organizations

Upon successful completion of this course, a student will be able to:
- **Explain** fundamental computing concepts, including the function of hardware, software, databases, and networks, while **demonstrating** use of appropriate technology vocabulary
- **Identify** common technologies used in information organizations and **discuss** the purpose(s) they serve in creating, managing, storing, and accessing information
- **Create** a substantial website on a topic relevant to the course
- **Explain** the impact of technology-related current events on information organizations and information professionals

LMS Program students: please see attached page for New York State Learning Standards applicable to this course and information on observation conducted within the scope of this class.

NOTE: Aspects of this course are subject to change at the discretion of the instructor. Any modifications will be announced and documented in a timely fashion.

3) COURSE REQUIREMENTS

READINGS & TUTORIALS

There will be several required readings and/or tutorials each week that provide background information and cover key concepts that will be discussed in class. It is expected that you will complete all assigned readings and tutorials <u>before</u> the class session. Links to all assigned materials will be posted on the LMS. Assigned materials should be completed in the order listed in the course schedule below.

Suggested Current Events Resources:

Your instructor regularly tweets articles of interest to this course (https://twitter.com/MonicaMaceli) and a list of useful sites to explore is available at: http://www.monicamaceli.com/currentevents

ASSIGNMENTS & GRADING

The course grade will consist of the following components:

Activity	Week Due	Grade Weighting
Individual Assignments		
Forum Posts (5 posts worth 3% each)	See schedule below	15%
HW1 - Hardware & Software	Week 3	10%
HW2 - Networks & Databases	Week 5	10%
HW3 - Web Basics	Week 8	20%
Class Participation	-	10%
Group Assignments		
Final Project Proposal	Week 11	5%
Final Project & Presentation	Week 15	30%

Detailed descriptions of each assignment will be distributed in class at least one week prior to the due date and posted to the LMS. Final grades will be awarded for points accumulated based on Pratt's grading scale (below). Scores for final grades are *not* rounded up.

Excellent	A	4.0 (93-100)	A-	3.7 (90-92.99)		
Above Average	B+	3.3 (87-89.99)	B	3.0 (83-86.99)	B-	2.7 (80-82.99)
Acceptable	C+	2.3 (77-79.99)	C	2.0 (73-76.99)		
Failure	F	0.0 (00-72.99)				

ASSIGNMENTS

All graded assignments must be uploaded to the LMS before class on the due date (unless otherwise noted). If there is a medical or personal reason for absences or late homework assignments, you must present your excuse in advance and in writing, via email. Students who do not give advance notice and receive approval will be subject to

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a **10% of grade per-day penalty** on late homework assignments. Late assignments will receive a grade, but may not receive feedback. **Assignments more than 4 days late will not be graded (and will earn a "0") unless you have prior written approval from your instructor.**

ATTENDANCE & PARTICIPATION

Active participation in class is essential to successful learning in this course, and is worth 10% of your final grade. The course format may vary each week, but typical class sessions will consist of short lectures and class activities and/or discussions, giving ample in-class participation opportunities. At various points during the course (noted in the course schedule below), you will be asked to post current events articles of interest to the course on the LMS; these activities will also count towards your participation grade.

Students with 3 absences (for any reason, including documented medical reasons) cannot expect to receive an A in the course and, in accordance with Pratt Institute policy, may be asked to drop the class. All course materials will be posted to the LMS for each week and you will be expected to make up any missed material for classes that you miss. You must **notify your instructor by email** as soon as possible if you anticipate missing a class session.

TECHNOLOGY TUTORING

SILS offers technology tutorial assistance to students taking LIS 654. Assistance with development components of assignments should be directed to the tutor. The tutoring service is managed through the SILS office and is available 20 hours a week either by walk-in or appointment. For information on hours of operation, contact the SILS office.

4) COURSE SCHEDULE

Part I: Information Technology Concepts	Due
Week 1 **1/19** **Course Overview & Introduction to Information Technology Concepts** ▪ <No readings>	

Week 2
1/26   **Hardware & Software:**
   ▪ Snyder, Lawrence. (2013). Chapter 7 – Representing Information Digitally. In *Fluency with Information Technology, 5th Edition* (pp. 191-216). Addison Wesley.
   ▪ Kernighan, B. (2011). Chapters 1-3. In *D is for Digital*. CreateSpace Independent Publishing Platform.
   ▪ How Open Source Software Can Improve Our Library http://www.collegeonline.org/library/managing-expenses/open-source-library.html
	Forum Post #1: LIS Careers & Information Technology

Week 3
2/2   **Networking & the Internet:**
   ▪ Snyder, Lawrence. (2013). Chapter 3 – The Basics of Networking. In *Fluency with Information Technology, 5th Edition* (pp. 49-74). Addison Wesley.
   ▪ A Brief History of the Internet http://www.isoc.org/internet/history/brief.shtml
	HW1 - Hardware & Software

Week 4 2/9	**Data & Databases:** ▪ Stair, R. & Reynolds, G. (2014). Chapter 3 – Database Systems, Data Centers, and Business Intelligence. In *Fundamentals of Information Systems, 7th Edition* (pp. 128-171). Cengage Learning. ▪ Yarger, R., Reese, G. & King, T. Chapter 1: Introduction to Relational Databases. In *MySQL & mSQL.* http://docstore.mik.ua/orelly/linux/sql/ch01_01.htm ▪ The Digital Shift. The Library Cloud Pros and Cons. http://www.thedigitalshift.com/2012/03/software/the-library-cloud-pros-and-cons/	**Forum Post #2: Current Events**
	Part II: Building and Evaluating Information Technology	
Week 5 2/16	**Web Design Basics (Part 1) – HTML:** ▪ Castro, E. & Hyslop, B. (2013). Chapter 1 – Webpage Building Blocks. In *HTML and CSS: Visual QuickStart Guide, 8th Edition* (pp. 1-26). Peachpit Press. ▪ A Brief History of Markup http://www.alistapart.com/articles/a-brief-history-of-markup/ ▪ Complete Units 1, 2, and 3 of the "HTML & CSS" tutorial available at https://www.codecademy.com/tracks/web	**HW2 - Networks & Databases**
Week 6 2/23	**Web Design Basics (Part 2) – CSS:** ▪ Castro, E. & Hyslop, B. (2013). Chapters 7 & 8. In *HTML and CSS: Visual QuickStart Guide, 8th Edition* (pp. 170-202). Peachpit Press. ▪ Complete Units 4, 5, and 6 of the "HTML & CSS" tutorial available at https://www.codecademy.com/tracks/web	
Week 7 3/1	**Graphics and Multimedia:** ▪ Castro, E. & Hyslop, B. (2013). Chapter 5 – Images. In *HTML and CSS: Visual QuickStart Guide, 8th Edition* (pp. 133-156). Peachpit Press. ▪ Castro, E. & Hyslop, B. (2013). Chapter 17 – Video, Audio and Other Multimedia. In *HTML and CSS: Visual QuickStart Guide, 8th Edition* (pp. 449-476). Peachpit Press. ▪ Web Style Guide. Graphics. http://webstyleguide.com/wsg3/11-graphics/index.html ▪ Web Style Guide. Multimedia. http://webstyleguide.com/wsg3/12-multimedia/index.html	**Forum Post #3: Current Events**
Week 8 3/8	**Web Programming:** ▪ Spraul, V. Anton. (2012). Chapter 1 - Strategies for Problem Solving. In *Think Like a Programmer* (pp. 1-23). San Francisco: No Starch Press. Available at http://www.it-ebooks.info/read/2224/ or on LMS (PDF) ▪ Complete Unit 1 of the "JavaScript" tutorial available at https://www.codecademy.com/learn/javascript	**HW3 - Web Basics**
3/15	▪ Spring Break - NO CLASS	

Week 9 3/22	**User Experience, Accessibility, & Universal Design:** • Norman, D. (2013). Chapter 1 – The Psychopathology of Everyday Things. In *The Design of Everyday Things* (pp. 1-36). • Web Style Guide - Chapter 2: Universal Usability. http://www.webstyleguide.com/wsg3/2-universal-usability/index.html • ASCLA. Assistive Technology Tipsheet. http://www.ala.org/ascla/files/asclaprotools/accessibilitytipsheets/tipsheets/11-Assistive_Technol.pdf	
Week 10 3/29	**Systems Development & Project Management:** • Stair, R. & Reynolds, G. (2014). Chapter 8 – Systems Development. In *Fundamentals of Information Systems, 7th Edition* (pp. 390-442). Cengage Learning. • Breeding, M (2015). Selection Strategies for Strategic Library Technologies. http://www.infotoday.com/cilmag/jan15/Breeding--Selection-Strategies-for-Strategic-Library-Technologies.shtml **Discuss group project & form groups**	**Forum Post #4: Current Events**

Part III: Technology in Information Organizations		
Week 11 4/5	**Technology in Libraries, Archives & Museums** • Library 2.0. http://lj.libraryjournal.com/2010/05/technology/library-2-0/ • Yang, S. & Hofmann, M. (2010). The Next Generation Library Catalog: A Comparative Study of the OPACs of Koha, Evergreen, and Voyager. Information Technology and Libraries, 29(3). Available from http://napoleon.bc.edu/ojs/index.php/ital/article/view/3139/2753 • Digital Asset Management: An Introduction to Key Issues http://www2.cit.cornell.edu/oit/Arch-Init/DigAssetMgmt.pdf • Content Management Systems: Trends in Academic Libraries http://ejournals.bc.edu/ojs/index.php/ital/article/download/4632/pdf	**Final Project Proposal Due**
Week 12 4/12	**XML, APIs and Linked Data:** • How Does XML Help Libraries? http://www.infotoday.com/cilmag/sep02/Banerjee.htm • Getting started with XML: A workshop [Read Part I: "General introduction to XML"] http://infomotions.com/musings/getting-started/getting-started.pdf • Schilling, V. Transforming Library Metadata into Linked Library Data. http://www.ala.org/alcts/resources/org/cat/research/linked-data	
Week 13 4/19	**Information Security & Privacy:** • Snyder, Lawrence. (2013). Chapter 12 – Privacy and Digital Security. In *Fluency with Information Technology, 5th Edition* (pp. 349-389). Addison Wesley. • Carver, B. IT Security for You and Your Library. http://www.infotoday.com/cilmag/jan14/Carver--IT-Security-for-You-and-Your-Library.shtml • Pfleeger, C., Pfleeger, S. & Margulies, J. (2015). Chapter 1: Introduction. In *Security in Computing, 5th Edition* (pp. 1-32). Prentice Hall.	**Forum Post #5: Current Events**

Week 14 **4/26**	**Intellectual Property, Open Access, & Crowdsourcing:** ▪ The Importance of Open Access, Open Source, and Open Standards for Libraries http://www.istl.org/05-spring/article2.html ▪ Holley, Rose. Crowdsourcing: How and Why should Libraries do it? DLIB Magazine, March/April 2010, Volume 16, Number 3/4. http://www.dlib.org/dlib/march10/holley/03holley.html ▪ Oomen, J. & Aroyo, L. 2011. Crowdsourcing in the cultural heritage domain: opportunities and challenges. In Proceedings of the 5th International Conference on Communities and Technologies (C&T '11). ACM, New York, NY, USA, 138-149. ▪ *[Optional] The Internet's Own Boy: The Story of Aaron Swartz - Full movie available at https://www.youtube.com/watch?v=vXr-2hwTk58*	
5/3	▪ Studio Days - NO CLASS	
Part IV: Final Presentations		
Week 15 **5/10**	**Course Summary and Final Group Presentations** ▪ <No readings due>	**Final Presentations & Group Project Due**

5) POLICIES

ACADEMIC HONESTY

Instances of cheating, plagiarism, and improper use of intellectual property will not be tolerated. Do not plagiarize or copy from anywhere, including articles, websites, class handouts, class slides, other students' work, web design templates or frameworks, work you have submitted to another course, etc. Unless specifically indicated otherwise, all assignments submitted for this course must be **your own work**, with sources properly cited.

Any assignment that includes copied material will be given an automatic *zero* – this includes cases where only a portion of the assignment is copied. Depending on the nature of the offense, this may also result in failure of the course. **No excuses will be accepted**. More information about Pratt's academic integrity code can be found at: http://www.prattsenate.org/learning/02-academic.htm

COMMUNICATION

The best way to contact me is by email (mmaceli@pratt.edu). I typically respond within 24 hours and usually much sooner. Should that change, you will be notified in advance. For questions pertaining to upcoming assignments, make sure to contact me well in advance of the deadline such that you can receive the necessary help prior to the deadline.

DISABILITIES

Students who require special accommodations for disabilities must obtain clearance from the Office of Disability Services at the beginning of the semester. For further information, contact the Coordinator of Disability Services in the Office of the Vice President for Student Affairs at 718.636.3711.

INCOMPLETES

Incompletes will not be awarded except for documented medical reasons. Students must have completed at least 70% of the course material with a grade of B or above.

INSTITUTE-WIDE POLICIES

All Institute-wide policies are listed in the Bulletin under "Community Standards" available online at http://www.pratt.edu/student_life/student_affairs/student_policies/ and which include policies on attendance, academic integrity, plagiarism, computer, and network use.

LAPTOPS & CELL PHONES

Please silence or turn your cell phone off during class. Laptops are permitted for coursework purposes only. Lab machines will be used for in-class activities only.

RESEARCH PARTICIPATION

As part of this course, students may be asked to participate in research studies conducted by SILS faculty.

6) SILS E-PORTFOLIO

Starting Fall 2012, all students entering the MSLIS degree program are required to complete an e-portfolio that must be approved by their advisor before they will be permitted to graduate. The e-portfolio provides students with an opportunity to showcase their best work from the courses they have taken at SILS, and an opportunity to demonstrate they have met the learning objectives of a Master of Information and Library Science.

Work completed for this course may be included in the e-portfolio. Students must demonstrate that their work fulfills at least one of the following learning outcomes:

1. Students carry-out and apply research.
2. Students demonstrate excellent communication skills and create and convey content.
3. Students use information technology and digital tools effectively.
4. Students apply concepts related to use and users of information and user needs and perspectives.
5. Students perform within the framework of professional practice.

Detailed information on the learning outcomes, requirements and how to create your e-portfolio is available from: http://www.pratt.edu/academics/information_and_library_sciences/about_sils/sils_eportfolio/

7) STUDENT TECHNOLOGY EXPECTATIONS

Aptitude in the use of Microsoft Windows-based personal computers, the Microsoft Office Suite and core Internet technologies is expected prior to enrollment. Proficiency with the skills listed below is assumed and will not be taught by SILS faculty or staff. Remedial and refresher texts are available in the Pratt Manhattan Library.

A. Microsoft Windows

1. Proficiency using **Windows-based computers**. Presently, Apple computers are not supported within the SILS curriculum.
2. **File Management** using Microsoft Windows (directories, folders, files, extensions, backing up files, install and uninstall programs).
3. Basic **software troubleshooting** using online help and by following instructions in software manuals.

B. Microsoft Office
1. Proficiency in word processing using **Microsoft Word.**
2. Design and creation of effective electronic presentations using **Microsoft PowerPoint.**
3. Familiarity with the principles for simple database design using **Microsoft Access** (set up, edit, save, sort, search for and manipulate data)

C. Internet
1. Use of **e-mail** (sending, receiving, replying, forwarding, backing up & deleting messages, as well as sending and opening file attachments)
2. **Web browsing** and **searching** (connecting to website, bookmarking, using Yahoo and Google for searching)
3. Downloading and uploading files using **FTP.**

8) LMS ADDENDUM

New York State Standards

This course addresses the following New York State Pedagogical Core Requirements:

General Requirements:

vi) Uses of technology, including instructional and assistive technology, in teaching and learning – and skill in using technology and teaching students to use technology to acquire information, communicate and enhance learning.

This course responds to The New York State Teaching Standards:

Standard VI: Professional Responsibilities and Collaboration

Teachers demonstrate professional responsibility and engage relevant stakeholders to maximize student growth, development, and learning.

Element V1.1: Teachers uphold professional standards of practice and policy as related to students rights and teachers' responsibilities. Performance indicator: d. Teachers advocate, model and manage safe, legal and ethical use of information and technology, including respect for intellectual property and the appropriate documentation of sources.

Element V1.2: Teachers engage and collaborate with colleagues and the community to develop and sustain a common culture that supports high expectations for student learning. Performance indicators: e. Teachers collaborate with others both within and outside the school to support student growth, development and learning. f. Teachers collaborate with the larger community to access and share learning resources.

LMS Program Students:

If you conduct field observation in a school library as part of this course, you may be eligible to receive credit toward your 100 hours of observation. If you have questions about whether an observation counts toward this requirement, please contact Professor Jessica Hochman, LMS coordinator jhochman@pratt.edu