
LIS-654

INFORMATION TECHNOLOGIES

Term: Fall 2017
Time & Location: Tuesday 11:30am-2:20pm (654-02)
Thursday 3:00pm-5:50pm (654-04)
Pratt Manhattan Center, Lab 606
Instructor Information: Monica Maceli, Ph.D.
Pratt Manhattan Center, Room 604c
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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 before 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.monica-maceli.com/currentevents>

ASSIGNMENTS & GRADING

The course grade will consist of the following components:

Activity	Week Due	Grade Weighting
<i>Individual Assignments</i>		
Forum Posts (5 posts worth 3% each)	See schedule below	15%
HW1 - Hardware & Software	Week 3	10%
HW2 - Networks & Databases	Week 6	10%
HW3 - Web Basics	Week 9	20%
Class Participation	-	10%
<i>Group Assignments</i>		
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 submitted on the LMS *before class* on the week due listed in the course schedule below. 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 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. Due to their essential role during in-class discussion, late forum posts will not be accepted and will receive a "0" grade.

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

SI 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 SI office and is available 20 hours a week either by walk-in or appointment. For information on hours of operation, contact the SI office.

4) COURSE SCHEDULE

Part I: Information Technology Fundamentals		Due
Week 1 8/29 (02) 8/31 (04)	Course Overview & Introduction to Information Technology Concepts <ul style="list-style-type: none"> Snyder, Lawrence. (2013). Chapter 7 – Representing Information Digitally. In <i>Fluency with Information Technology, 5th Edition</i> (pp. 191-216). Addison Wesley. 	
Week 2 9/5 (02) 9/7 (04)	Hardware & Software: <ul style="list-style-type: none"> Kernighan, B. (2011). Chapters 1-3. In <i>D is for Digital</i>. CreateSpace Independent Publishing Platform. Wikibooks. Open Source. https://en.wikibooks.org/wiki/Open_Source 	Forum Post #1: LIS Careers & Information Technology
Week 3 9/12 (02) 9/14 (04)	Networking & the Internet: <ul style="list-style-type: none"> Snyder, Lawrence. (2013). Chapter 3 – The Basics of Networking. In <i>Fluency with Information Technology, 5th Edition</i> (pp. 49-74). Addison Wesley. Leiner, B. et al. A Brief History of the Internet. http://www.isoc.org/internet/history/brief.shtml 	HW1 - Hardware & Software

Week 4 9/19 (02) 9/21 (04)	Data & Databases: <ul style="list-style-type: none"> Stair, R. & Reynolds, G. (2014). Chapter 3 – Database Systems, Data Centers, and Business Intelligence. In <i>Fundamentals of Information Systems, 7th Edition</i> (pp. 128-171). Cengage Learning. Yarger, R., Reese, G. & King, T. Chapter 1: Introduction to Relational Databases. In <i>MySQL & mSQL</i>. http://docstore.mik.ua/oreilly/linux/sql/ch01_01.htm Complete "Lesson: Manipulation" of Unit 1 of the "Learn SQL" tutorial available at https://www.codecademy.com/learn/learn-sql 	Forum Post #2: Current Events
Week 5 9/26 (02) 9/28 (04)	Big Data & The Web: <ul style="list-style-type: none"> Snyder, Lawrence. (2013). Chapter 5 – Locating Information on the WWW. In <i>Fluency with Information Technology, 5th Edition</i> (pp. 123-153). Addison Wesley. Chandler, N. How the Deep Web Works. http://computer.howstuffworks.com/internet/basics/how-the-deep-web-works.htm/printable Reinhalter, L. & Wittmann, R. J. The Library: Big Data's Boomtown. The Serials Librarian. Available from http://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=1089&context=lib_pubs The Digital Shift. The Library Cloud Pros and Cons. http://www.thedigitalshift.com/2012/03/software/the-library-cloud-pros-and-cons/ 	
Part II: Building and Evaluating Information Technology		
Week 6 10/3 (02) 10/5 (04)	Web Design Basics (Part 1) – HTML: <ul style="list-style-type: none"> A Brief History of Markup http://www.alistapart.com/articles/a-brief-history-of-markup/ Castro, E. & Hyslop, B. (2013). Chapter 1 – Webpage Building Blocks. In <i>HTML and CSS: Visual QuickStart Guide, 8th Edition</i> (pp. 1-26). Peachpit Press. Complete Units 1, 2, 8, and 9 of the "Learn HTML & CSS" tutorial available at https://www.codecademy.com/learn/learn-html-css 	HW2 - Networks & Databases
10/10	**Midterm Break**	
Week 7 10/17 (02) 10/12 (04)	Web Design Basics (Part 2) – CSS: <ul style="list-style-type: none"> Castro, E. & Hyslop, B. (2013). Chapters 7 & 8. In <i>HTML and CSS: Visual QuickStart Guide, 8th Edition</i> (pp. 170-202). Peachpit Press. Complete Units 3 through 7 of the "Learn HTML & CSS" tutorial available at https://www.codecademy.com/learn/learn-html-css 	Forum Post #3: Current Events
Week 8 10/24 (02) 10/19 (04)	Graphics and Multimedia: <ul style="list-style-type: none"> Castro, E. & Hyslop, B. (2013). Chapter 5 – Images. In <i>HTML and CSS: Visual QuickStart Guide, 8th Edition</i> (pp. 133-156). Peachpit Press. Castro, E. & Hyslop, B. (2013). Chapter 17 – Video, Audio and Other Multimedia. In <i>HTML and CSS: Visual QuickStart Guide, 8th Edition</i> (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 	

Week 9 10/31 (02) 10/26 (04)	Web Programming: <ul style="list-style-type: none"> Spraul, V. Anton. (2012). Chapter 1 - Strategies for Problem Solving. In <i>Think Like a Programmer</i> (pp. 1-23). San Francisco: No Starch Press. Available at http://www.it-ebooks.info/read/2224/ or on LMS (PDF) Complete Unit 1 and 2 of the "Learn JavaScript" tutorial available at https://www.codecademy.com/learn/learn-javascript 	HW3 - Web Basics
Week 10 11/7 (02) 11/2 (04)	Web Programming (continued) & User Experience: <ul style="list-style-type: none"> Norman, D. (2013). Chapter 1 – The Psychopathology of Everyday Things. In <i>The Design of Everyday Things</i> (pp. 1-36). Complete Unit 3 and 4 of the "Learn JavaScript" tutorial available at https://www.codecademy.com/learn/learn-javascript <p>Discuss group project, form groups, and group work time</p>	Forum Post #4: Current Events
Part III: Technology in Information Organizations		
Week 11 11/14 (02) 11/9 (04)	Accessibility & Universal Design: <ul style="list-style-type: none"> 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 	Final Project Proposal Due
Week 12 11/21 (02) 11/16 (04)	XML, APIs and Linked Data: <ul style="list-style-type: none"> 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 	
11/22-11/26	**Thanksgiving Break**	
Week 13 11/28 (02) 11/30 (04)	Information Security & Privacy: <ul style="list-style-type: none"> Snyder, Lawrence. (2013). Chapter 12 – Privacy and Digital Security. In <i>Fluency with Information Technology, 5th Edition</i> (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 <i>Security in Computing, 5th Edition</i> (pp. 1-32). Prentice Hall. 	Forum Post #5: Current Events

Week 14 12/5 (02) 12/7 (04)	Intellectual Property, Open Access, & Crowdsourcing: <ul style="list-style-type: none"> 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. 	
Part IV: Final Presentations		
Week 15 12/12 (02) 12/14 (04)	Course Summary and Final Group Presentations <ul style="list-style-type: none"> <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 SI faculty.

6) MSLIS 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 SI, 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: <https://www.pratt.edu/academics/information/current-students/mslis-e-portfolio/>

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 SI faculty or staff. Remedial and refresher texts are available in the Pratt Manhattan Library.

A. Microsoft Windows

1. Proficiency using **Windows-based computers.**

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**.

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)

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