
INFO-654

INFORMATION TECHNOLOGIES

Term: Spring 2018-2019
Time & Location: Wednesday 11:30am-2:20pm
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: <https://www.monicamaceli.com/cv#officehours>

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:

- Understand, use, discuss, and be able to help others with core computing technologies, including hardware, operating systems, software applications, Internet/web technologies and assistive technologies.
- Evaluate different technologies to determine the most appropriate infrastructure, systems, and tools needed to solve a problem or achieve a goal.
- Be able to use up-to-date web technologies to edit and maintain a substantial website.
- Ability to use critical approaches when evaluating information technologies, including the evaluation of technology-related current events.

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. A list of useful sites to explore for technology-related current events is available at <http://www.monicamaceli.com/currentevents>

ASSIGNMENTS & GRADING

The course grade will consist of the following components:

Activity	Week Due	Grade Weighting
<i>Individual Assignments</i>		
Careers & Information Technology Post	Week 3	10%
Current Events Presentation	TBD	10%
Network & Databases Lab	Week 6	15%
Web Basics Project	Week 9	25%
<i>Group Assignment</i>		
Final Project Proposal	Week 11	10%
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 available on the LMS. Post assignments will be submitted on the class' Wordpress blog, instructions will be distributed in class prior to the first assignment. 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 post assignments will not be accepted and will receive a "0" grade.

TECHNOLOGY TUTORING

SI offers technology tutorial assistance to students taking INFO 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 1/23	Course Overview & Introduction to Information Technology Concepts <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 1: Digital Content. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. 	
Week 2 1/30	Hardware & Software: <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 2: Digital Devices. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Parsons, J. J. (2016). Unit 6: Software. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Wikibooks. Open Source. https://en.wikibooks.org/wiki/Open_Source 	
Week 3 2/6	Networking & the Internet: <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 3: Networks. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Leiner, B. et al. (1997). A Brief History of the Internet. http://www.isoc.org/internet/history/brief.shtml 	Careers & Information Technology Post
Week 4 2/13	Data & Databases: <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 10: Databases. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Complete "Lesson: Manipulation" of Unit 1 of the "Learn SQL" tutorial available at https://www.codecademy.com/learn/learn-sql 	Current Events Presentation #1
Week 5 2/20	Big Data & The Web: <ul style="list-style-type: none"> Charles, V. & Emrouznejad, A. (2018). Chapter 1 - Big Data for the Greater Good: An Introduction. In <i>Studies in Big Data, Volume 42</i>. Springer. Chandler, N. How the Deep Web Works. http://computer.howstuffworks.com/internet/basics/how-the-deep-web-works.htm/printable 	Current Events Presentation #2
Part II: Building and Evaluating Information Technology		
Week 6 2/27	Web Design Basics (Part 1) – HTML: <ul style="list-style-type: none"> 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 and 2 of the "Learn HTML" tutorial available at https://www.codecademy.com/learn/learn-html 	Network & Databases Lab Current Events Presentation #3

Week 7 3/6	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 1, 2, and 3 of the "Learn CSS" tutorial available at https://www.codecademy.com/learn/learn-css ▪ [Optional] Complete Units 4, 5, and/or 6 of the "Learn CSS" tutorial to go further with color, typography, and/or grid layouts if desired 	Current Events Presentation #4
Spring Break - NO CLASS		
Week 8 3/20	Graphics & 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. Chapter 11: Images. https://webstyleguide.com/wsg4/11-images.html ▪ Web Style Guide. Chapter 12: Video. http://webstyleguide.com/wsg3/12-multimedia/index.html 	Current Events Presentation #5
Week 9 3/27	Programming: <ul style="list-style-type: none"> ▪ Parsons, J. J. (2016). Unit 11: Programming. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. ▪ 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. ▪ Complete Unit 1 and 2 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>	Web Basics Project <i>Brainstorm group project ideas</i>
Week 10 4/3	<p>**No class – instructor at conference; complete tutorial, review materials posted on the LMS, and work on final group project proposal**</p> <p>Programming (continued) & APIs:</p> <ul style="list-style-type: none"> ▪ Complete Unit 3, 4, and 5 of the "Learn JavaScript" tutorial available at https://www.codecademy.com/learn/learn-javascript 	
Week 11 4/10	User Experience & Accessibility: <ul style="list-style-type: none"> ▪ Norman, D. (2013). Chapter 1 – The Psychopathology of Everyday Things. In <i>The Design of Everyday Things - Revised and Expanded Edition</i> (pp. 1-36). ▪ Web Style Guide - Chapter 2: Universal Usability. http://www.webstyleguide.com/wsg3/2-universal-usability/index.html 	Final Project Proposal Due Current Events Presentation #6
Part III: Technology in Information Organizations		

Week 12 4/17	XML, Standards & Interoperability <ul style="list-style-type: none"> Fawcett, J. et al. (2012). Chapter 1: What is XML? In <i>Beginning XML, 5th ed.</i> Wrox. Morgan, E. L. (2004). Getting started with XML: A workshop [Read I: General introduction to XML and II. Stylesheets with CSS & XSLT] Available at: http://infomotions.com/musings/getting-started/getting-started.pdf 	Current Events Presentation #7
Week 13 4/24	Information Security & Privacy: <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 7: Digital Security. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Pfleeger, C., Pfleeger, S. & Margulies, J. (2015). Chapter 1: Introduction. In <i>Security in Computing, 5th Edition</i> (pp. 1-32). Prentice Hall. 	Current Events Presentation #8
Week 14 5/1	Information Systems & Systems Analysis: <ul style="list-style-type: none"> Parsons, J. J. (2016). Unit 9: Information Systems. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18th ed.)</i> Cengage Learning. Future Trends: <ul style="list-style-type: none"> Antonopoulos, A. M. (2017). Ch 1 and Ch 2. In <i>Mastering Bitcoin: Programming the Open Blockchain.</i> O'Reilly Media. Tagliaferri, L. (2017). An Introduction to Machine Learning. Available at https://www.digitalocean.com/community/tutorials/an-introduction-to-machine-learning Nichols, G. (2018). Augmented and virtual reality mean business: Everything you need to know. Available at https://www.zdnet.com/article/augmented-and-virtual-reality-mean-business-everything-you-need-to-know/ 	Current Events Presentation #9
Part IV: Final Presentations		
Week 15 5/8	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, work you have submitted to another course, etc. Unless specifically indicated otherwise, all assignments submitted for this course must be **your own work**. 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**. For more information on Pratt's Academic Integrity Standards, please visit <http://bit.ly/prattacademicintegrity>.

ATTENDANCE & PARTICIPATION

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. 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. For more information on Pratt Institute's Attendance Policy, please visit <http://bit.ly/prattattendance>.

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. If you are experiencing a technical issue, please be as specific as possible in your communications; for example, you can include code samples or screenshots in your email.

DISABILITIES

Pratt Institute is committed to the full inclusion of all students. If you are a student with a disability and require accommodations, please contact the Learning/Access Center (L/AC) at LAC@pratt.edu to schedule an appointment to discuss these accommodations. Students with disabilities who have already registered with the L/AC are encouraged to speak to the professor about accommodations they may need to produce an accessible learning environment.

INCOMPLETES

Incompletes will not be awarded except for documented medical reasons. Students must have completed at least 80% 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.

6) PORTFOLIO

Work completed for this course may be included in your portfolio. For more information on each program's portfolio requirements, please visit the program's respective webpage:

- MS Library & Information Science: Portfolio - <http://bit.ly/prattmslisportfolio>
- MS Information Experience Design: Portfolio - <http://bit.ly/prattmsixdportfolio>
- MS Data Analytics and Visualization: Portfolio - <http://bit.ly/prattmsdavportfolio>
- MS Museums and Digital Culture: Portfolio - <http://bit.ly/prattmsmdcportfolio>

You are encouraged to meet with your advisor about including projects in your portfolio.