

---

# INFO-654-01

## INFORMATION TECHNOLOGIES

---

<b>Term:</b>	Fall 2023-2024
<b>Time &amp; Location:</b>	Tuesdays 11:30AM - 02:20PM Pratt Manhattan Center, Lab 606
<b>Instructor Information:</b>	Monica Maceli, Ph.D. Pratt Manhattan Center, Room 604c <a href="mailto:mmaceli@pratt.edu">mmaceli@pratt.edu</a>
<b>Credits:</b>	3.0
<b>Pre-requisites:</b>	None
<b>Office Hours:</b>	<a href="https://www.monicamaceli.com/contact/">https://www.monicamaceli.com/contact/</a>

---

### 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.
- Use up-to-date web technologies to edit a substantial website and employ online technology-focused educational resources.
- 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 (made freely available) 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 <https://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. 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 (or given in the appropriate class session for presentation assignments). 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 or presentations 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 approximately 20 hours a week. For information on hours of operation, contact the SI office.

### 4) COURSE SCHEDULE

\*All assignments, slides, readings, and/or videos should be completed *before* that week's class session. All course materials and Zoom connection information available on the Canvas LMS at <http://canvas.pratt.edu/>

<b>Part I: Information Technology Fundamentals</b>		<b>Assignments Due</b>
<b>Week 1</b> 8/29	<b>Course Overview &amp; Introduction to Information Technology Concepts</b> <ul style="list-style-type: none"> <li>▪ Parsons, J. J. (2016). Unit 1: Digital Content. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> </ul>	-
<b>Week 2</b> 9/5	<b>Hardware &amp; Software:</b> <ul style="list-style-type: none"> <li>▪ Parsons, J. J. (2016). Unit 2: Digital Devices. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>▪ Parsons, J. J. (2016). Unit 6: Software. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>▪ Wikibooks. Open Source. <a href="https://en.wikibooks.org/wiki/Open_Source">https://en.wikibooks.org/wiki/Open_Source</a></li> </ul>	-
<b>Week 3</b> 9/12	<b>Networking &amp; the Internet:</b> <ul style="list-style-type: none"> <li>▪ Parsons, J. J. (2016). Unit 3: Networks. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>▪ Leiner, B. et al. (1997). A Brief History of the Internet. <a href="https://arxiv.org/html/cs/9901011">https://arxiv.org/html/cs/9901011</a></li> </ul>	<b>Careers &amp; Information Technology Post</b>
<b>Week 4</b> 9/19	<b>Data &amp; Databases:</b> <ul style="list-style-type: none"> <li>▪ Parsons, J. J. (2016). Unit 10: Databases. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>▪ Complete SQL tutorials 0, 1, 2, and 5 at <a href="https://sqlzoo.net/">https://sqlzoo.net/</a> (skip the "Harder" set of questions)</li> </ul>	<b>Current Events Presentation #1</b>
<b>Week 5</b> 9/26	<b>Big Data &amp; The Web:</b> <ul style="list-style-type: none"> <li>▪ Wing, J. M. (2018). The Data Life Cycle. <a href="https://hdsr.mitpress.mit.edu/pub/577rq08d">https://hdsr.mitpress.mit.edu/pub/577rq08d</a></li> <li>▪ Complete SQL tutorial 6 (questions 1 through 7) at <a href="https://sqlzoo.net/">https://sqlzoo.net/</a></li> <li>▪ Charles, V. &amp; Emrouznejad, A. (2018). Chapter 1 - Big Data for the Greater Good: An Introduction. In <i>Studies in Big Data, Volume 42</i>. Springer.</li> </ul>	<b>Current Events Presentation #2</b>
<b>Part II: Building and Evaluating Information Technology</b>		
<b>Week 6</b> 10/3	<b>Web Design Basics (Part 1) – HTML:</b> <ul style="list-style-type: none"> <li>▪ Casabona, J. (2020) Chapters 1 through 5. In <i>HTML and CSS: Visual QuickStart Guide, 9th Edition</i>.</li> <li>▪ Complete "Basic HTML and HTML5" tutorial through "Create an Ordered List", available at <a href="https://www.freecodecamp.org/learn/responsive-web-design/#basic-html-and-html5">https://www.freecodecamp.org/learn/responsive-web-design/#basic-html-and-html5</a></li> </ul>	<b>Network &amp; Databases Lab</b>  <b>Current Events Presentation #3</b>
<p style="color: red; margin: 0;">Tuesday, October 10</p> <p style="color: red; margin: 0;">Mid Term Break – no classes, offices open.</p>		

<b>Week 7</b> <b>10/17</b>	<b>Web Design Basics (Part 2) – CSS:</b> <ul style="list-style-type: none"> <li>▪ Casabona, J. (2020) Chapters 11 through 14. In <i>HTML and CSS: Visual QuickStart Guide, 9th Edition</i>. Peachpit Press.</li> <li>▪ Complete “Basic CSS” tutorial through “Adjust the Margin of an Element”, available at <a href="https://www.freecodecamp.org/learn/responsive-web-design/#basic-css">https://www.freecodecamp.org/learn/responsive-web-design/#basic-css</a></li> <li>▪ How to Design Websites With AI: Using AI to Simplify the Web Design Process + Tips <a href="https://www.hostinger.com/tutorials/how-to-design-websites-with-ai">https://www.hostinger.com/tutorials/how-to-design-websites-with-ai</a></li> </ul>	<b>Current Events Presentation #4</b>
<b>Week 8</b> <b>10/24</b>	<b>Multimedia and Page Layout:</b> <ul style="list-style-type: none"> <li>▪ Casabona, J. (2020) Chapters 7, 15, and 16. In <i>HTML and CSS: Visual QuickStart Guide, 9th Edition</i>.</li> <li>▪ The Hidden Image Descriptions Making the Internet Accessible <a href="https://www.nytimes.com/interactive/2022/02/18/arts/alt-text-images-descriptions.html?smid=tw-share">https://www.nytimes.com/interactive/2022/02/18/arts/alt-text-images-descriptions.html?smid=tw-share</a></li> </ul>	<b>Current Events Presentation #5</b>
<b>Week 9</b> <b>10/31</b>	<b>Programming:</b> <ul style="list-style-type: none"> <li>▪ Parsons, J. J. (2016). Unit 11: Programming. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>▪ 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.</li> <li>▪ Complete “Basic JavaScript” course from start through “Finding a Remainder in JavaScript” <a href="https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript">https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript</a></li> <li>▪ Complete “Use Conditional Logic with If Statements” through “Chaining If Else Statements” <a href="https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript">https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript</a></li> <li>▪ Coding with AI: Tips and best practices from developers. <a href="https://www.infoworld.com/article/3700771/coding-with-ai-developer-tips-and-best-practices.html">https://www.infoworld.com/article/3700771/coding-with-ai-developer-tips-and-best-practices.html</a></li> </ul>	<b>Web Basics Project</b>  <b>Current Events Presentation #6</b>
<b>Week 10</b> <b>11/7</b>	<b>Programming (continued) &amp; APIs:</b> <ul style="list-style-type: none"> <li>▪ Complete “Store Multiple Values in one Variable using JavaScript Arrays” through “Assignment with a Returned Value” <a href="https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript">https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/#basic-javascript</a></li> </ul> <b>Discuss group project, form groups, and group work time</b>	<b>Current Events Presentation #7</b>  <i>Brainstorm group project ideas</i>
<b>Week 11</b> <b>11/14</b>	<b>User Experience &amp; Accessibility:</b> <ul style="list-style-type: none"> <li>▪ 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).</li> <li>▪ Web Style Guide - Chapter 2: Universal Usability. <a href="http://www.webstyleguide.com/wsg3/2-universal-usability/index.html">http://www.webstyleguide.com/wsg3/2-universal-usability/index.html</a></li> </ul>	<b>Final Project Proposal Due</b>  <b>Current Events Presentation #8</b>
<b>Part III: Technology in Information Organizations</b>		

<b>Week 12</b> 11/21	<b>Copyright, Intellectual Property &amp; DRM</b> <ul style="list-style-type: none"> <li>Chapter 9 “Intellectual Property Strategies for Software: Patent and Copyright Protection” in Halt, G. B., Donch, J. C., Stiles, A. R., &amp; Robert, F. (2014). Intellectual property in consumer electronics, software and technology startups. New York, NY: Springer.</li> <li>Subramanya, S. R., &amp; Yi, B. K. (2006). Digital rights management. IEEE potentials, 25(2), 31-34.</li> <li>Hernandez, R. J., Miranda, C., &amp; Goñi, J. (2020). Empowering Sustainable Consumption by Giving Back to Consumers the ‘Right to Repair.’ Sustainability, 12(3), 850. <a href="https://www.mdpi.com/2071-1050/12/3/850/pdf">https://www.mdpi.com/2071-1050/12/3/850/pdf</a></li> </ul>	<b>Current Events Presentation #9</b>
<b>Week 13</b> 11/28	<b>Information Security &amp; Privacy:</b> <ul style="list-style-type: none"> <li>Parsons, J. J. (2016). Unit 7: Digital Security. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> <li>Pfleeger, C., Pfleeger, S. &amp; Margulies, J. (2015). Chapter 1: Introduction. In <i>Security in Computing, 5th Edition</i> (pp. 1-32). Prentice Hall.</li> </ul>	<b>Current Events Presentation #10</b>
<b>Week 14</b> 12/5	<b>Information Systems &amp; Systems Analysis:</b> <ul style="list-style-type: none"> <li>Parsons, J. J. (2016). Unit 9: Information Systems. In <i>New Perspectives on Computer Concepts 2016, Comprehensive (18<sup>th</sup> ed.)</i> Cengage Learning.</li> </ul> <b>Group work time and project Q&amp;A</b>	
<b>Part IV: Final Presentations</b>		
<b>Week 15</b> 12/12	<b>Course Summary and Final Group Presentations</b> <ul style="list-style-type: none"> <li>&lt;No readings due&gt;</li> </ul>	<b>Final Presentations &amp; Group Project Due</b>

## 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, Stack Overflow, 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.** 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](mailto:mmaceli@pratt.edu)). I typically respond within 24 hours. 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 due date.

### 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.

---

## HUMAN RIGHTS, EQUITY, BERT, AND TITLE IX

---

Pratt Institute seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of harassment, discrimination, bias, or sexual misconduct, we encourage you to report this. If you inform me (your professor) of an issue of harassment, discrimination or bias, or sexual misconduct I will keep the information as private as I can, but I am required to bring it to the attention of the institution's Title IX Coordinator. You can access Title IX services by emailing [titleix@pratt.edu](mailto:titleix@pratt.edu). You can also speak to someone confidentially by contacting our non-mandatory reporters: Health Services at 718-399-4542, Counseling Services 718-687-5356 or Campus Ministries 718-596-4840. In cases of Bias, this information may go to our Bias Education & Response Taskforce (BERT). You can contact BERT by either reaching out directly via [bert@pratt.edu](mailto:bert@pratt.edu) or by contacting the BERT Co-Chair and Title IX Coordinator, Dr. Esmilda Abreu.

For more information, please refer to the Community Standards webpage: <http://bit.ly/prattcommunitystandards>.

---

## 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.