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# LIS-697-01

## WEB DEVELOPMENT

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**Term:** Spring 2015  
**Time & Location:** Wednesday 3:00pm - 5:50pm  
Pratt Manhattan Center, Lab 606  
**Instructor Information:** Monica Maceli, Ph.D.  
Pratt Manhattan Center, Room 604c  
[mmaceli@pratt.edu](mailto:mmaceli@pratt.edu) | [www.monicamaceli.com](http://www.monicamaceli.com)  
**Credits:** 3.0  
**Pre-requisites:** LIS 654  
**Office Hours:** Tuesdays 3-5pm or by appointment

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### 1) BULLETIN DESCRIPTION

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Modern websites in the information professions are highly interactive, consisting of dynamic web pages generated by client- and server-side scripts and database queries. This course will cover the basic methods and tools for developing database-driven web sites, through a hands-on approach. Topics covered will include: Internet architecture; development environment and workflow; server-side scripting; database design and development for website data management; and version control. Students will have the opportunity to create a database-driven website on a topic relating to their professional interests.

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### 2) COURSE GOALS & OBJECTIVES

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The goals of this course are to:

- Gain a broad understanding of the role and function of the technological elements of the modern web.
- Provide practical hands-on experience with creating database-driven websites.
- Build knowledge of technical concepts and terminology, to facilitate communication with information professionals and technologists.

Upon successful completion of this course, a student will be able to:

- **Understand** and **explain** the client/server architecture of the modern web, including the function of each element in the LAMP stack
- **Create** dynamic web pages using PHP and MySQL
- **Design** and **implement** databases to store and manipulate website data
- **Create** a database-driven website
- **Document** and **explain** code and technological decisions to team-mates with varying levels of technological expertise.
- **Use** version control software to track changes in code over time

*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

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#### READINGS & RESOURCES

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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 materials before the class session.

*Required Textbook:*

Robin Nixon (2014). *Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5, 4<sup>th</sup> Edition*. O'Reilly Media. ISBN: 978-1491918661.

*Development Software:*

XAMPP is a free, web development package that includes Apache, PHP, and MySQL with versions for Mac, Windows and Linux. Instructions on how to download, install, and use will be provided in class.

*Web Hosting:*

During the course, you will be provided with free access to a LAMP webserver. This space is not intended for long-term use, but your instructor will discuss paid hosting options if you wish to continue your work in this area.

*Online tutorials [Optional]:*

Full access to Lynda.com technology tutorials is available through Pratt libraries. Account creation instructions are detailed at: <http://libguides.pratt.edu/lynda>.

#### ASSIGNMENTS AND GRADING

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The course grade will consist of the following components:

Activity	Week Due	Grade Weighting
<i>Assignments</i>		
Database HW	Week 4	15%
PHP Code HWs	Weeks 7/8/9	15%
Class Participation	-	15%
<i>Final Project (Individual)</i>		
Project: Database Design	Week 10	10%
Project: Sitemap	Week 12	5%
Project: Code Review	Week 14	5%
Project: Final Website	Week 15	30%
Project: Presentation	Week 15	5%

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

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All graded assignments must be submitted on 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 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

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Active participation in class is essential to successful learning in this course, and is worth 15% of your final grade. The course format may vary each week, but typical class sessions will consist of short lectures, peer code reviews, and other hands-on class activities, giving ample in-class participation opportunities. *Note: Code review assignments require your presence in class to receive a passing grade (graded as credit/no-credit).*

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.

## 4) COURSE SCHEDULE

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*\*Learning\_PHP\_MySQL\_and\_JavaScript\_4<sup>th</sup> Edition = LPMJ*

<b>Part I: Introduction to Dynamic Websites</b>		<b>Readings</b>	<b>Due</b>
<b>Week 1</b> 1/20	Introduction to web development XAMPP development environment	<b>LPMJ* Ch1 &amp; Ch2</b>	
<b>Part II: Relational Databases</b>			
<b>Week 2</b> 1/27	Introduction to relational databases MySQL client and phpMyAdmin	<b>LPMJ Ch8</b>	<b>&lt;&lt;Install XAMPP&gt;&gt;</b>
<b>Week 3</b> 2/3	Database design & normalization SQL queries	<b>LPMJ Ch9</b>	
<b>Week 4</b> 2/10	Advanced SQL queries		<b>Database HW</b>
<b>Part III: PHP Fundamentals</b>			

<b>Week 5</b> 2/17	Introduction to PHP Version control	<b>LPMJ Ch3</b>	<i>[Optional] Review Codecademy Web Track</i>
<b>Week 6</b> 2/24	Expressions and control flow Development & production environment	<b>LPMJ Ch4</b>	<< <i>Install Github</i> >>
<b>Week 7</b> 3/2	Functions and objects	<b>LPMJ Ch5</b>	<b>Code HW #1</b>
<b>Week 8</b> 3/9	<b>**No class – instructor at conference; individual meetings will be arranged on Mon/Tues**</b>	<b>LPMJ Ch6 Review W8 "Arrays" Slides &amp; Examples</b>	<b>Code HW #2</b>
<b>3/16</b>	<b>Spring Break - NO CLASS</b>		
<b>Week 9</b> 3/23	Arrays, continued Discuss final project	<b>LPMJ Ch7</b>	<b>Code HW #3</b>
<b>Part IV: Database-Driven Websites</b>			
<b>Week 10</b> 3/30	Putting it all together: accessing MySQL using PHP	<b>LPMJ Ch10</b>	<b>Project: Database Design</b>
<b>Week 11</b> 4/6	Working with user data: form handling and search	<b>LPMJ Ch11</b>	
<b>Week 12</b> 4/13	Cookies, sessions, and authentication	<b>LPMJ Ch12</b>	<b>Project: Sitemap</b>
<b>Week 13</b> 4/20	Working on the command line Deployment to production server	<b><u>"A Command Line Primer For Beginners"</u></b>	<b><u>Command line tutorial (Complete "Navigation" and "Manipulation")</u></b>
<b>Week 14</b> 4/27	Project code review Lab work session		<b>Project: Code Review</b>
<b>5/4</b>	<b>Studio Days - NO CLASS</b>		
<b>Part V: Final Projects</b>			
<b>Week 15</b> 5/11	Course wrap-up and project presentations		<b>Project: Final Site &amp; Presentations</b>

## 5) POLICIES

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### ACADEMIC HONESTY

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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**. 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

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The best way to contact me is by email ([mmaceli@pratt.edu](mailto: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.

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## DISABILITIES

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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.

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## INCOMPLETES

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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.

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## INSTITUTE-WIDE POLICIES

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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/](http://www.pratt.edu/student_life/student_affairs/student_policies/) and which include policies on attendance, academic integrity, plagiarism, computer, and network use.

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## LAPTOPS & CELL PHONES

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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.

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## RESEARCH PARTICIPATION

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

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## 6) SILS E-PORTFOLIO

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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. Detailed information on the learning outcomes, requirements and how to create your e-portfolio is available from: <https://www.pratt.edu/academics/information/sils-eportfolio/>

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.