

# MET CS602: Syllabus

## Overview of CS602: Server-side Web Development

This class focuses on PHP, NodeJS with MySQL and MongoDB. Students should bring their laptops to every class for the hands-on laboratories.

### Instructor

[asheehan@bu.edu](mailto:asheehan@bu.edu) Office hours are by appointment. Please reserve and time and place with me.

### Classroom Location

CGS (College of General Studies)

*Room 527, 871 Commonwealth Avenue, Brookline, MA 02446*

<https://goo.gl/maps/Ws5SFvJCJWpgEmBn8>

### Required eBooks

- Learning PHP, MySQL & JavaScript, 5th Edition  
Robin Nixon  
ISBN 978-1-491-97891-7  
<https://amzn.to/2rZAp2d>
- Practical Node.js – Building Real-World Scalable Web Apps.  
Azat Mardan  
978-1-4842-3039-8  
<https://www.apress.com/us/book/9781484230381>
- PHP & MySQL: Novice to Ninja, 6th Edition.

Tom Butler and Kevin Yank

978-0-9953827-8-7

<https://amzn.to/2Fo3FCL>

- NodeJS Notes For Professionals (Free PDF/online)

<https://medium.com/easyread/e-book-node-js-notes-for-professionals-book-e13db79d7b08>

## Course Policies

- Homework will not be accepted after its due date.
- If you do not participate in class (or do not show up or come), you probably will not succeed in the exams, as they are challenging.

## Grading Policies

- Homework/Laboratories/Quizzes: 25%
- Midterm Examination: 25%
- Term Project: 25%
- Final Examination: 25%

# Schedule

Week	Topics	Readings
Jan-23	<ul style="list-style-type: none"> <li>• Introductions and Workstation configuration</li> <li>• Getting your 000webhost.com website/hosting setup</li> <li>• Review/Warm-ups: ES6</li> <li>• Setup/Install Node</li> <li>• NPM (Node Package Manager)</li> </ul>	<p>Please get your workstation/laptop ready for development for the semester. Begin your reading ahead of time for next week as well.</p>
Jan-30	<ul style="list-style-type: none"> <li>• Fundamentals of server-side Javascript with Node</li> <li>• Introduction to Middleware: Express JS</li> <li>• Configuring Express Routes</li> <li>• Using ReactJS with NodeJS</li> </ul>	<ul style="list-style-type: none"> <li>• Mardan: 2</li> </ul>
Feb-6	<ul style="list-style-type: none"> <li>• Creating Services with Express/Node</li> <li>• Persistence: Node with MongoDB</li> <li>• Open Source: Mongoose for Data Models</li> </ul>	<ul style="list-style-type: none"> <li>• Mardan: 5</li> </ul>
Feb-	<ul style="list-style-type: none"> <li>• Streams, Servers and</li> </ul>	<ul style="list-style-type: none"> <li>• Mardan: 8,9</li> </ul>

13	<ul style="list-style-type: none"> <li>Sockets</li> <li>Developing RESTful Web Services</li> </ul>	
Feb-20	<ul style="list-style-type: none"> <li>Security and Authentication</li> <li>Developing RESTful Web Services</li> </ul>	<ul style="list-style-type: none"> <li>Mardan: 6</li> </ul>
Feb-27	<ul style="list-style-type: none"> <li>Test Driven Development (TDD) with Jasmine and Mocha</li> </ul>	<ul style="list-style-type: none"> <li>Mardan: 3</li> </ul>
Mar-5	Midterm Examination	
Mar-12	Spring Break	
Mar-19	<ul style="list-style-type: none"> <li>PHP Language Fundamentals</li> </ul>	<ul style="list-style-type: none"> <li>Nixon: 3,4 (skim 1,2)</li> <li>Butler: 2</li> </ul>
Mar-26	<ul style="list-style-type: none"> <li>PHP Functions</li> <li>Data Structures/Arrays</li> <li>Form Handling, Superglobals, Built-in types</li> </ul>	<ul style="list-style-type: none"> <li>Nixon: 5,6</li> <li><a href="#">php.net - Data Structures</a></li> </ul>
Apr-2	<ul style="list-style-type: none"> <li>Session Management</li> <li>Uploading/Downloading Files</li> </ul>	<ul style="list-style-type: none"> <li>Nixon: 7, 12</li> <li>Butler: 11</li> </ul>
Apr-9	<ul style="list-style-type: none"> <li>Classes, Interfaces and</li> </ul>	<ul style="list-style-type: none"> <li>Nixon: 5</li> </ul>

	Object-oriented PHP	<ul style="list-style-type: none"> <li>• Butler: 8</li> </ul>
Apr-16	<ul style="list-style-type: none"> <li>• Introduction to MySQL and Relational Databases</li> </ul>	<ul style="list-style-type: none"> <li>• Nixon: 8</li> <li>• Butler: 3, 12, 13</li> </ul>
Apr-23	<ul style="list-style-type: none"> <li>• MySql with PHP</li> <li>• Using PDO</li> </ul>	<ul style="list-style-type: none"> <li>• Nixon: 10</li> <li>• Butler: 4</li> </ul>
Apr-30	<a href="#">Review &amp; Term Project Presentations</a>	
May-7	<a href="#">Final Examination</a>	

