Course syllabus: BUAD 3283 E-Commerce Web Development

Spring Semester, 2018

Bemidji State University
Memorial Hall Room 270
Tuesday/Thursday 2:00-3:15 p.m.

Course Description

WWW environment, browsers, Web 2.0, Ajax Client and programming techniques. Major topics include Web page design, Web-based multimedia/graphics, XHTML, W3C XHTML validation service, CSS AND JavaScript. Create Headings, Links, Images, Special characters, Tables, Lists, Forms, Positioning Elements, Embedded Style Sheets, Text Flow, Box Model, User Style sheet and Drop-Down Menu. Prerequisites: BUAD 2280 and any computer programming course. (Source: BSU 2015-2016 catalog)

Contact Info

Instructor	Nate Nolting
Office	Paul Bunyan Communications
Phone	218-444-1107 (only in emergencies)
Email	natebsu@gmail.com
Office Hours	30 minutes after class

Requirements

Texts

HTML and CSS: Design and Build Websites 1st Edition
by Jon Duckett
ISBN-10: 1118008189
ISBN-13: 978-1118008188
Publisher: Wiley; 1st edition (November 8, 2011)
Paperback: 490 pages
Codes for this book: http://www.htmlandcssbook.com/code-samples/

JavaScript and JQuery: Interactive Front-End Web Development 1st Edition
by Jon Duckett
ISBN-10: 1118531647
ISBN-13: 978-1118531648

Publisher: Wiley; 1st edition (June 30, 2014)
Paperback: 640 pages
Codes for this book: http://www.javascriptbook.com/press/

Those above two books can also be bought as a set:

Web Design with HTML, CSS, JavaScript and jQuery Set 1st Edition
by Jon Duckett
ISBN-10: 1118907442
ISBN-13: 978-1118907443
Publisher: Wiley; 1 edition (July 8, 2014)

Note

Additional reading assignments from other publications such as journal/conference papers, white papers, or reports can be assigned by the instructor.

Web Hosting Account

Please sign-up for a free account with any of the free hosting services available on the Internet, for example:

- X10 hosting at: https://x10hosting.com/

Note:

Instead of using your BSU email address, use your Gmail or Yahoo email address for signing-up. Some of those free services require you to visit your account at least once a month or so to avoid any suspension due to inactivity.

Source Code

Somewhere to store your source code, whether it's on a flash drive or stored on a cloud platform like Google Drive or Dropbox.

Software

Editor

An editor for writing assignment code, for example, Atom https://atom.io or Sublime Text https://www.sublimetext.com.

Browser

Web browser with developer tools like Chrome or Firefox.

GIT

GIT SCM and an optional GIT SCM GIU like SourceTree https://www.sourcetreeapp.com.

FTP

An FTP client to send files to your hosting account, for example Filezilla https://filezilla-project.org.

GitHub

A GitHub account for showing source code for assignments and projects.
Assignments will be posted on https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development
You will maintain your own GitHub repository for your assignments.

Slack

A Slack account that will be used for messaging out of class. This will be the best way to ask a question out of class. You will receive a invite link in your syllabus.

Additional Resources

Texts

Electronic Commerce
by Gary P. Schneider
11th Edition
ISBN-10: 1-285-42543-X
ISBN-13: 978-1-285-42543-6
Course Technology @2014

Effortless E-Commerce with PHP and MySQL
by Larry Ullman
ISBN-10: 0-321-94936-6
ISBN-13: 978-0-321-94936-3

The Missing Link: An Introduction to Web Development and Programming
by Michael Mendez
ISBN: 978-0-9897226-5-0
SUNY Fredonia 2014
(OPEN TEXTBOOK available for Free at http://textbooks.opensuny.org/the-missing-link-an-introduction-to-web-development-and-programming/)

Websites

- Php http://www.php.net/
- Mozilla Developer Network (MDN): https://developer.mozilla.org/en-US
- Stack Overflow: https://stackoverflow.com
- Reddit: https://www.reddit.com/user/fordlincolnhg/m/webdev/

Sandboxes

- CodePen https://codepen.io/
- JSFiddle https://jsfiddle.net/
- JS Bin https://jsbin.com/?

The Department of Business Administration Mission

Educate students through a learning-centered environment.

To achieve its mission, the Department of Business Administration has adopted the following broad-based, student learning goal:

- Graduates will be prepared for entry into careers in business and for contributions to their global and local communities.

In addition, the Department of Business Administration has adopted the following program-level student learning outcomes *(starred outcomes are a focus of this course)*:

1. ★ Graduates will demonstrate a foundational knowledge in the field of business.
2. ★ Graduates will demonstrate information literacy.
3. ★ Graduates will demonstrate ability to use practical business tools.
4. ★ Graduates will demonstrate professional communication skills.
5. ★ Graduates will demonstrate ability to work effectively as part of a team.
6. ★ Graduates will demonstrate the ability to analyze complex business situations and ethical obligations in a realistic business environment.
7. Graduates will demonstrate ability to analyze complex business situations and ethical obligations in a realistic business environment.

Course Objectives and Learning Outcomes

After completing this course the students are able to do following:

- Explain components for setting-up e-commerce site (DSLO# 1, 2, 5)
- Build a simple web site that organizes information effectively (DSLO# 4, 5)
- Identify an organization for information based on its inherent structure (chronological, alphabetic, etc.) (DSLO# 2)
- Use HTML tags, elements and attributes in developing web sites (DSLO# 2, 3)
- Use cascading style sheets (CSS) to create style standards for a web site (DSLO# 2, 3)
- Create a navigational framework that matches the content and genre of the site (DSLO# 3)
- Explain separation of concerns as it applies to the design and implementation of a web site (DSLO# 2)
- Describe the issues involved in developing a web interface (DSLO# 2, 3)
- Design and implement a web interface (DSLO# 2, 3)
- Compare/contrast graphic media file format characteristics such as color depth, compression and CODEC (DSLO# 2)
- Explain and compare media file formats including lossy vs. lossless compression, color palettes, streaming formats, and CODECs (DSLO# 2)
- Develop Client-side scripts using JavaScript (DSLO# 2, 3)

- Explain how server-side technology such as PHP works (DSLO# 2, 3)

DSLO = Department Student Learning Outcomes

Learning outcomes	Measures
setting-up e-commerce site, building simple web site, designing web interface, and creating navigational framework	Reading chapters, take quizzes, hands-on experience, Discussion, and final exam
Using HTML	Doing projects, and Hands-on experience in the Computer
CSS, JavaScript, PHP, media files	Reading chapters, doing projects in the Computer, discussion, quiz and Final Exam
Issue in developing web sites	Doing projects , quizzes and Final Exam

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Grading

Your final grade is based on a straight point calculation: points earned/points offered. However, participation and attendance will be considered, but only if it will help your grade.

Grade	Percentage
A	90% and up
B	80-89%
C	70-79%
D	60-69%
F	59% and below (fail)

Extra Credit

Extra credit may be available throughout the semester. Do not count on extra credit though!

Assigned Reading

There may be multiple readings each week. Readings may consist of chapters from the textbook, companion readings, video viewings, interactive tools within the learning management system, the syllabus, and other items.

Assignments

There will be multiple mini assignments that will be turned in through Github. These assignments will be due 12:01 a.m. on the Tuesday or Thursday the assignment it due unless specified in the Course Assignments.

Midterm and Final

There will be a midterm project that will be due at a date to be assigned by the instructor. The final examination will actually be the completion of the project that you will be working on throughout the entire semester. This means it is **VERY IMPORTANT** to keep up with what is required for the project, and not wait until the last minute to try to do everything. This is your warning.

Note

The professor reserves the right to offer unannounced quizzes and assignments, and/or activities at any time.

Authorized Absences

You have the choice whether to show up to class or not. That being said, attendance and participation will only help your grade. The instructor reserves the right to change the schedule of reading/or due date for assignments, so being in class is important.

Late work

Not accepted unless you have prior approval. Anything turned in after the due date will receive a failing grade.

Accommodations

Upon request, this document can be made available in alternative formats. If you have a documented disability and need accommodations for this course, please contact the Disability Services Office in 201 Sanford Hall; phone: (218) 755-3883; email DisabilityServices@bemidjistate.edu. Minnesota Relay Service is available at 1-800-627-3529.

Academic integrity and general conduct

You are responsible to read and abide by the rules contained within the student handbook: http://www.bemidjistate.edu/students/handbook/. Any form of academic dishonesty (e.g., cheating, plagiarism, and misrepresentation), inappropriate behavioral conduct, or general disruptive conduct will not be tolerated and will be dealt with in accordance with University Policy.

Course Schedule

This course schedule is tentative and subject to change. **ALL** assignments are due no later than 12:01 a.m. on the date listed unless otherwise noted.

January 9th

Get Syllabus and have a good week!!!

Assignment

1. Download and install software and decide where you will store your source code.
2. Setup your own GitHub Account and let me know what your repository will be.

- Watch the syllabus repository at https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development to receive notifications of changes.

3. Signup for the Slack channel with the link in Requirement section.
4. Get your web hosting account setup and let me know what the url is.

January 11th

No Class

January 16th

Discussion

- **Review syllabus, go over any issues with the setup from last week.**
- **How the web works**
    - Domain Name System (DNS) https://en.wikipedia.org/wiki/Domain_Name_System
    - Transport Layer Security (TLS) https://en.wikipedia.org/wiki/Transport_Layer_Security
- **Elements of an E-Commerce web application.**
    - Payment Gateway for handling transactions https://en.wikipedia.org/wiki/Payment_gateway
    - TLS for transferring data
    - Handling sensitive data
        - Sanitize in, encode out https://security.stackexchange.com/a/95330
- **How a web page is created**
    - HTML https://en.wikipedia.org/wiki/HTML
    - Body for page structure and display
    - Head for page instructions
    - CSS for styling
    - Javascript for interactions and DOM manipulations
    - Includes such as images and other media

How a web page is created

HTML page structure

```
<!DOCTYPE html> <!-- Document Type -->
<html lang="en">
<!-- Start instructions for page -->
<head>
    <!-- Page Encoding -->
    <meta charset="UTF-8">
    <!-- Title of page -->
    <title>Title</title>
    <!-- Link to a external stylesheet -->
    <link rel="stylesheet" href="/link/to/a/style/sheet.css">
    <!-- Link to a external JavaScript file -->
    <script type="application/javascript"
src="/link/to/a/page/blocking/js/file.js"></script>
    <!-- Embedded JavaScript -->
    <script type="application/javascript">
      console.log('Hello World');
    </script>
</head>
<!-- End instructions for page -->
<!-- Start visual part of page -->
<body>
  <img src="/path/to/an/image.png" alt="This is the alt text for this image if it
is missing." />
  <p>Hello World</p>
  <script type="application/javascript"
src="/link/to/a/non/page/blocking/js/file.js"></script>
</body>
<!-- End visual part of page -->
</html>
```

Parts

Tags

- They include paragraph, lists, tables, etc.
- They either require open and close tags or are self closing
    - Open and close: `<p>Hello World</p>`
    - Self closing: `<img src="/path/to/an/image.png" alt="This is the alt text for this image if it is missing." />`
- They have attributes: `<img src="image.png" alt="Alt text" />`, `src` and `alt` are attributes.

DOCTYPE

- Many different HTML DOCTYPE Declaration depending on the type of document https://www.w3.org/QA/2002/04/valid-dtd-list.html
- **The standard now is the HTML5 DOCTYPE** `<!DOCTYPE html>`

HTML

- Body and head are wrapped with `<html></html>`
- Sets the language of page with the `lang` attribute https://w3c.github.io/html/dom.html#the-lang-and-xmllang-attributes

Head

- Contained within `<head></head>`
- Includes instructions for the page
    - Example: `<meta charset="UTF-8">` Tells the browser to use UTF-8 character encoding for the HTML page.
- Include external CSS and JS
- Meta tags used by browser, search spiders, screen readers, etc.

Body

- Contains the visual output of the page
- Contained within `<body></body>`

Assignment

- Read chapters 1-9 in *HTML and CSS: Design and Build Websites 1st Edition*
- Setup Hosting Account and Git repository on GitHub, **due before class on 1-18**

January 18th

Discussion

- Files for a web site
- Structural / Semantic tags

Assignment

See [course_assignment/course_assignment_04_January_18.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_04_January_18.md)](https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_04_January_18.md)

Files for a web site

Index

- `index.html`, `index.php`, others depending on server language
- Entry point of web site

Cascading Style Sheet (CSS)

- `.css` file extension
- Holds styling for the site
- Linked in the head typically with `<link rel="stylesheet" href="/link/to/css/file.css">`

Javascript

- `.js` file extension
- Might be library file or a custom script
- Linked in the head or at the end of the body tags in the HTML with `<script src="/link/to/script.js"></script>`

Other Files

- `.htaccess` for Apache server instructions
- `robots.txt` for instructions given to search engines http://www.robotstxt.org/
- Verification files for 3rd party tools, ie. Google Analytics

Structural / Semantic tags

Structural Tags

- Meant for layout of a web page
- Typically are block elements
- Give structure to pages
- Used for header, footer, navigation, articles, etc.
- Include `div`, `p`, `ul`, `ol`, `h1` → `h6`, `br`, `hr`, `table`, etc.

Semantic Tags

- Meant to describe elements
- Used inside structural elements to give content more meaning
- Typically bad practice to include structural elements inside a semantic tag: `<p><strong>I'm strong</strong></p>` rather than `<strong><p>I'm strong but invalid</p></strong>`
- Include `em`, `strong`, `code`, `blockquote`, `span`, and many more
- Just pick the tag that seems the most appropriate

Tables

- Typically only of tabular data
- Starts with `table` with rows `tr` that wrap a list of columns `td`
- Head row has `th` column tags

Table example

```
<table>
  <tr>
    <th>Foo</th>
    <th>Bar</th>
    <th>Baz</th>
  </tr>
  <tr>
    <td>Foo</td>
    <td>Bar</td>
    <td>Baz</td>
  </tr>
</table>
```

Makes:

Foo	Bar	Baz
Foo	Bar	Baz

Lists

- Unordered `ul` creates a bulleted list by default
- Ordered `ol` create a numbered list by default
- List items wrapped with `li` tags

Link example

```
<ul>
  <li>Foo</li>
  <li>Bar</li>
  <li>Bazz</li>
</ul>

<ol>
  <li>Foo</li>
  <li>Bar</li>
  <li>Bazz</li>
</ul>
```

Makes:

- Foo
- Bar
- Bazz

1. Foo
2. Bar
3. Bazz

Links

- Links can act as semantic or structural
- Links can link to different pages and target specific place on a page
- Links can target an app, open an email message, prompt a phone call, etc.

Link Examples

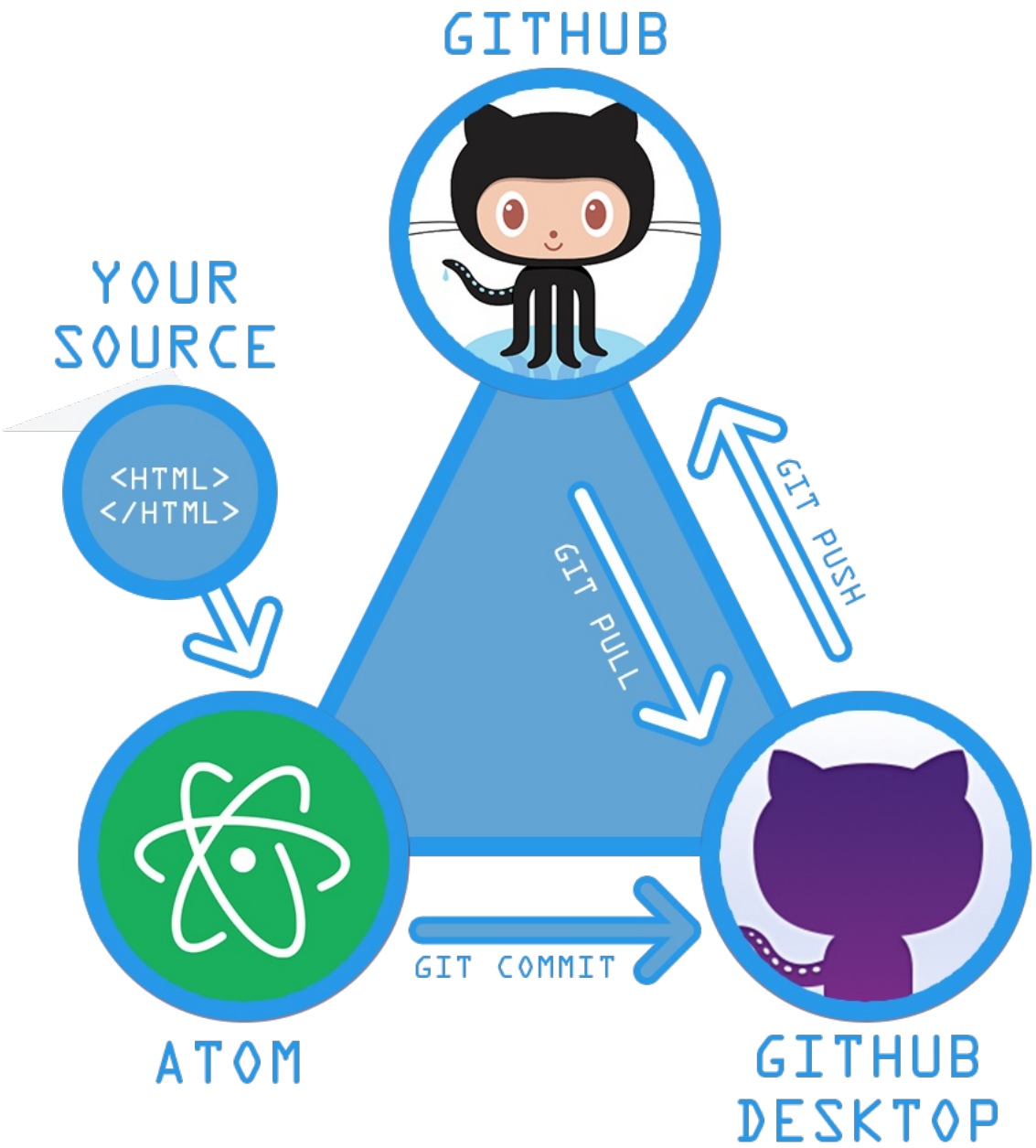
```
<!-- link to another page -->
<a href-"/link/to/another/page.html">Link to another page</a>

<!-- link to an external page -->
<a href="https://google.com">Link to Google</a>

<!-- link to a specific point on a page... -->
<a href="#anchor">Link to an anchor</a>
<!-- ...then at the point that the above should link to -->
<a name="anchor" id="anchor"></a>

<!-- link that opens an email -->
<a href="mailto:somone@example.com">Link to Email</a>

<!-- link to call a number -->
<a href="tel:1234567890">Call a number</a>
```

January 23rd

Discussion

Source Control

- Discussion on how to get code changes into the cloud on GitHub.



There are quite a few GIU tools for getting code into source control. (https://git-scm.com/download/gui/windows) When working with GitHub (https://github.com/) it seems that the easiest route to take would be to use Atom (https://atom.io/) for edits, then use GitHub Desktop (https://desktop.github.com/) for interacting with your remote repository. The tools a developer picks to complete a task or solve a problem is largely immaterial as long as the end result is successful.

Assignment:

See course_assignment/course_assignment_05_January_23.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_05_January_23.md)

January 25th

TBA

Assignment:

See course_assignment/course_assignment_06_January_25.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_06_January_25.md)

January 30th

TBA

Assignment:

See course_assignment/course_assignment_07_January_30.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_07_January_30.md)

February 1st

TBA

Assignment:

See course_assignment/course_assignment_08_February_01.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_08_February_01.md)

February 6th

TBA

Assignment:

See course_assignment/course_assignment_09_February_06.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_09_February_06.md)

February 8th

TBA

Assignment:

See course_assignment/course_assignment_10_February_08.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_10_February_08.md)

February 13th

TBA

Assignment:

See course_assignment/course_assignment_11_February_13.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_11_February_13.md)

February 15th

TBA

Assignment:

See course_assignment/course_assignment_12_February_15.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_12_February_15.md)

February 20th

TBA

Assignment:

See course_assignment/course_assignment_13_February_20.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_13_February_20.md)

February 22nd

TBA

Assignment:

See course_assignment/course_assignment_14_February_22.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_14_February_22.md)

February 27th

TBA

Assignment:

See course_assignment/course_assignment_15_February_27.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_15_February_27.md)

March 1st

TBA

Assignment:

See course_assignment/course_assignment_16_March_01.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_16_March_01.md)

March 6th

TBA

Assignment:

See course_assignment/course_assignment_17_March_06.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_17_March_06.md)

March 8th

TBA

Assignment:

See course_assignment/course_assignment_18_March_08.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_18_March_08.md)

March 13th

TBA

Assignment:

See course_assignment/course_assignment_19_March_13.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_19_March_13.md)

March 15th

TBA

Assignment:

See course_assignment/course_assignment_20_March_15.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_20_March_15.md)

March 20th

TBA

Assignment:

See course_assignment/course_assignment_21_March_20.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_21_March_20.md)

March 22nd

TBA

Assignment:

See course_assignment/course_assignment_22_March_22.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_22_March_22.md)

March 27th

TBA

Assignment:

See course_assignment/course_assignment_23_March_27.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_23_March_27.md)

March 29th

TBA

Assignment:

See course_assignment/course_assignment_24_March_29.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_24_March_29.md)

April 3rd

TBA

Assignment:

See course_assignment/course_assignment_25_April_03.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_25_April_03.md)

April 5th

TBA

Assignment:

See course_assignment/course_assignment_26_April_05.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_26_April_05.md)

April 10th

TBA

Assignment:

See course_assignment/course_assignment_27_April_10.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_27_April_10.md)

April 12th

TBA

Assignment:

See course_assignment/course_assignment_28_April_12.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_28_April_12.md)

April 17th

TBA

Assignment:

See course_assignment/course_assignment_29_April_17.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_29_April_17.md)

April 19th

TBA

Assignment:

See course_assignment/course_assignment_30_April_19.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_30_April_19.md)

April 24th

TBA

Assignment:

See course_assignment/course_assignment_31_April_24.md (https://github.com/natenolting/BUAD-3283-E-Commerce-Web-Development/blob/spring2018/course_assignment/course_assignment_31_April_24.md)
