## Schedule

A week-by-week breakdown of the material.

## Week 1 (01/05-01/09)

- Day 1
  - History of Javascript<sup>1</sup>
  - Components of a Web Page<sup>2</sup>
  - Survey of HTML<sup>3</sup>
- Day 2
  - Survey of CSS<sup>4</sup>
  - A sample page<sup>5</sup>
  - Lab 16
- Day 3
  - How to run Javascript<sup>7</sup>
  - Numbers in Javascript<sup>8</sup>
  - Local and Global Variables<sup>9</sup>
  - Basics of Arrays<sup>10</sup>

# Week 2 (01/12-01/16)

- Day 1
  - Basics of Objects: Object literals<sup>11</sup>
  - Equality in Javascript<sup>12</sup>
  - Strings and Regular Expressions  $^{13}$
  - Function basics 14
  - Lab 2<sup>15</sup>

<sup>&</sup>lt;sup>1</sup>notes/history.html

<sup>&</sup>lt;sup>2</sup>notes/page\_components.html

<sup>&</sup>lt;sup>3</sup>notes/html\_survey.html

<sup>&</sup>lt;sup>4</sup>notes/css\_survey.html

<sup>&</sup>lt;sup>5</sup>notes/sample\_page.html

<sup>&</sup>lt;sup>6</sup>labs/1.html

<sup>&</sup>lt;sup>7</sup>notes/how to run.html

<sup>&</sup>lt;sup>8</sup>notes/numbers.html

<sup>&</sup>lt;sup>9</sup>notes/local\_vs\_global.html

<sup>&</sup>lt;sup>10</sup>notes/array\_basics.html

<sup>&</sup>lt;sup>11</sup>notes/object\_basics.html

<sup>&</sup>lt;sup>12</sup>notes/equality.html

<sup>&</sup>lt;sup>13</sup>notes/strings\_and\_re.html

<sup>&</sup>lt;sup>14</sup>notes/functions\_basic.html

<sup>&</sup>lt;sup>15</sup>labs/2.html

- Quiz 1<sup>16</sup>
- Day 2
  - No class
- Day 3
  - No class

## Week 3 (01/19-01/23)

- Day 1
  - Functions as values<sup>17</sup>
  - Arrow Functions<sup>18</sup>
  - Array Collection methods<sup>19</sup>
- Day 2
  - Function Usage Patterns<sup>20</sup>
  - ES6 Classes<sup>21</sup>
  - Lab 3<sup>22</sup>
- Day 3
  - Function call forms and the value of this <sup>23</sup>
  - Introduction to the DOM (Document Object Model)<sup>24</sup>

# Week 4 (01/26-01/30)

- Day 1
  - Introduction to jQuery<sup>25</sup>
- Day 2
  - Practice with jQuery
- Day 3
  - Introduction to DOM Events<sup>26</sup>

<sup>&</sup>lt;sup>16</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=15591

<sup>&</sup>lt;sup>17</sup>notes/function values.html

<sup>&</sup>lt;sup>18</sup>notes/function\_arrow.html

<sup>&</sup>lt;sup>19</sup>notes/array\_collection\_methods.html

<sup>&</sup>lt;sup>20</sup>notes/function\_usage\_patterns.html

<sup>&</sup>lt;sup>21</sup>notes/classes.html

<sup>&</sup>lt;sup>22</sup>labs/3.html

<sup>&</sup>lt;sup>23</sup>notes/function\_calls\_and\_this.html

<sup>&</sup>lt;sup>24</sup>notes/dom intro.html

<sup>&</sup>lt;sup>25</sup>notes/jquery\_intro.html

<sup>&</sup>lt;sup>26</sup>notes/events\_intro.html

#### Week 5 (02/02-02/06)

- Day 1
  - Timers<sup>27</sup>
  - Overview of Software Development Practices<sup>28</sup>
- Day 2
  - Basics of Version Control<sup>29</sup>
- Day 3
  - Module Patterns: Node/CommonJS modules<sup>30</sup>
  - TaskApp: Building a Web App<sup>31</sup>

# Week 6 (02/09-02/13)

- Day 1
  - Testing Basics<sup>32</sup>
  - TaskApp (cont)<sup>33</sup>
- Day 2
  - Custom Events: Observer, Publish/Subscribe<sup>34</sup>
- Day 3
  - Observer pattern in TaskApp.

# Week 7 (02/16-02/20)

- Day 1
  - Boundaries: controller vs UI/view.
  - Test doubles in the controller.
- Day 2
  - ES6 features: String Templates, Symbols
  - ES6 features: Promises
  - Quiz 2<sup>35</sup>

<sup>&</sup>lt;sup>27</sup>notes/events\_timers.html

<sup>&</sup>lt;sup>28</sup>notes/dev\_overview.html

<sup>&</sup>lt;sup>29</sup>notes/git\_version\_control.html

<sup>&</sup>lt;sup>30</sup>notes/pattern\_modules.html

<sup>&</sup>lt;sup>31</sup>notes/taskapp\_setup.html

<sup>&</sup>lt;sup>32</sup>notes/testing\_basics.html

<sup>&</sup>lt;sup>33</sup>notes/taskapp\_setup.html

<sup>&</sup>lt;sup>34</sup>notes/custom\_events.html

<sup>35</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=17430

- Day 3
  - MIDTERM<sup>36</sup>

#### Week 8 (02/23-02/27)

**BREAK** 

#### Week 9 (03/02-03/06)

- Day 1
  - Lab 4<sup>37</sup>
- Day 2
  - Assignment of Projects<sup>38</sup>
- Day 3
  - Using Templates: Handlebars<sup>39</sup>
  - The DRY principle<sup>40</sup>
  - Object properties<sup>41</sup>
  - Different stack implementations<sup>42</sup>
  - Object creation and prototypes<sup>43</sup>
  - "Class" construction examples<sup>44</sup>

## Week 10 (03/09-03/13)

- Day 1
  - Graphics in Javascript, SVG<sup>45</sup>
- Day 2
- Day 3

<sup>&</sup>lt;sup>36</sup>midtermStudyGuide.html

<sup>&</sup>lt;sup>37</sup>labs/4.html

 $<sup>^{38}</sup>$ notes/project\_descriptions.html

<sup>&</sup>lt;sup>39</sup>notes/templates.html

<sup>&</sup>lt;sup>40</sup>notes/dry.html

<sup>&</sup>lt;sup>41</sup>notes/object\_properties.html

<sup>&</sup>lt;sup>42</sup>notes/stack\_various.html

<sup>&</sup>lt;sup>43</sup>notes/object\_creation\_prototypes.html

<sup>&</sup>lt;sup>44</sup>notes/class construction.html

<sup>&</sup>lt;sup>45</sup>notes/graphics.html

## Week 11 (03/16-03/20)

- Day 1
  - Documentation systems<sup>46</sup>
  - Code Reviews<sup>47</sup>
- Day 2
- Day 3

#### Week 12 (03/23-03/27)

- Day 1
- Day 2
  - Basics of HTTP<sup>48</sup>
  - Introduction to XMLHttpRequest<sup>49</sup>
- Day 3

#### Week 13 (03/30-04/03)

- Day 1
  - Projects progress
- Day 2
  - Projects progress
- Day 3

## Week 14 (04/06-04/10)

- Day 1
  - Projects progress
- Day 2
  - What we left out<sup>50</sup>
  - Final Study Guide<sup>51</sup>
- Day 3

<sup>&</sup>lt;sup>46</sup>notes/documentation.html

<sup>&</sup>lt;sup>47</sup>notes/code\_review.html

<sup>48</sup>notes/http\_intro.html

<sup>&</sup>lt;sup>49</sup>notes/xhr\_intro.html

<sup>&</sup>lt;sup>50</sup>notes/left\_out.html

<sup>&</sup>lt;sup>51</sup>notes/final\_study\_guide.html

## Other topics we did not cover

- MVC: Model-View-Controller<sup>52</sup>
- Intro to Patterns: Iterator<sup>53</sup>
- Lab 5: Collections<sup>54</sup>
- Design Patterns<sup>55</sup>
- Patterns of code reuse<sup>56</sup>
- Pattern: Command<sup>57</sup>
- Pattern: Proxy<sup>58</sup>
- Pattern: Visitor<sup>59</sup>
- Pattern: Visitor (cont)<sup>60</sup>
- Lab 6: Double-Linked Lists, History<sup>61</sup>
- Pattern: Composite<sup>62</sup>
- Patterns: Adapter and Facade<sup>63</sup>
- Example of Designing a Model<sup>64</sup>

#### Old notes

- Functions as closures<sup>65</sup>
- Functions as a means for creating a scope/context<sup>66</sup>
- Git basics<sup>67</sup>
- Review of Git commands<sup>68</sup>
- GitHub basics<sup>69</sup>
- Remotes and Branches<sup>70</sup>
- GitHub Workflow<sup>71</sup>
- Overall Project Workflow<sup>72</sup>
- Methods in objects and the need for this 73

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<sup>52</sup>notes/pattern mvc.html
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<sup>&</sup>lt;sup>53</sup>notes/patterns\_iterator.html

<sup>&</sup>lt;sup>54</sup>labs/5.html

<sup>&</sup>lt;sup>55</sup>notes/design\_patterns.html

<sup>&</sup>lt;sup>56</sup>notes/code\_reuse.html

<sup>&</sup>lt;sup>57</sup>notes/patterns\_command.html

<sup>&</sup>lt;sup>58</sup>notes/patterns\_proxy.html

<sup>&</sup>lt;sup>59</sup>notes/patterns\_visitor.html

<sup>&</sup>lt;sup>60</sup>notes/patterns\_visitor.html

<sup>61</sup> labs/6.html

<sup>62</sup>notes/patterns\_composite.html

<sup>63</sup>notes/patterns\_adapter\_facade.html

<sup>64</sup>notes/design\_example.html

<sup>&</sup>lt;sup>65</sup>notes/function closures.html

<sup>66</sup> notes/functions\_for\_scope.html

<sup>&</sup>lt;sup>67</sup>notes/git\_basics.html

<sup>&</sup>lt;sup>68</sup>notes/git\_commands\_review.html

<sup>69</sup>notes/github\_basics.html

<sup>&</sup>lt;sup>70</sup>notes/git\_remotes\_branches.html

<sup>&</sup>lt;sup>71</sup>notes/github workflow.html

<sup>&</sup>lt;sup>72</sup>notes/project\_workflow.html

<sup>&</sup>lt;sup>73</sup>notes/object methods.html

- Setting up a second remote<sup>74</sup>
  AMD Modules<sup>75</sup>
  Using require.js<sup>76</sup>
  UMD modules<sup>77</sup>

- ullet The Visitor Pattern and the need for it  $^{78}$

<sup>&</sup>lt;sup>74</sup>notes/second\_remote.html <sup>75</sup>notes/amd\_modules.html <sup>76</sup>notes/requirejs.html <sup>77</sup>notes/umd.html

<sup>&</sup>lt;sup>78</sup>notes/patterns\_visitor.html