## 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>
  - How to run Javascript<sup>3</sup>
  - Numbers in Javascript<sup>4</sup>
  - Local and Global Variables<sup>5</sup>
  - Basics of Arrays<sup>6</sup>
- Day 2
  - Basics of Objects: Dictionaries<sup>7</sup>
  - Equality in Javascript<sup>8</sup>
  - Strings and Regular Expressions<sup>9</sup>
  - Function basics<sup>10</sup>
  - Lab 0<sup>11</sup>
  - Quiz 1<sup>12</sup>

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

- Day 1
  - Functions as values<sup>13</sup>
  - Functions as closures<sup>14</sup>
- Day 2
  - Functions as a means for creating a scope/context<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/how\_to\_run.html

<sup>&</sup>lt;sup>4</sup>notes/numbers.html

<sup>&</sup>lt;sup>5</sup>notes/local\_vs\_global.html

<sup>&</sup>lt;sup>6</sup>notes/array\_basics.html

<sup>&</sup>lt;sup>7</sup>notes/object\_basics.html

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

<sup>&</sup>lt;sup>9</sup>notes/strings\_and\_re.html

<sup>&</sup>lt;sup>10</sup>notes/functions basic.html

<sup>&</sup>lt;sup>11</sup>labs/0.html

<sup>&</sup>lt;sup>12</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=32970

<sup>&</sup>lt;sup>13</sup>notes/function\_values.html

<sup>&</sup>lt;sup>14</sup>notes/function\_closures.html

<sup>&</sup>lt;sup>15</sup>notes/functions\_for\_scope.html

- Array Collection methods<sup>16</sup>
- Function Usage Patterns<sup>17</sup>
- Quiz 2<sup>18</sup>
- Lab 1<sup>19</sup>

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

- Day 1
  - Overview of Software Development Practices<sup>20</sup>
  - Basics of Version Control<sup>21</sup>
  - Git basics<sup>22</sup>
  - Review of Git commands<sup>23</sup>
  - GitHub basics<sup>24</sup>
- Day 2
  - Remotes and Branches<sup>25</sup>
  - GitHub Workflow<sup>26</sup>
  - Overall Project Workflow<sup>27</sup>
  - Methods in objects and the need for this<sup>28</sup>
  - Function call forms and the value of this<sup>29</sup>

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

- Day 1
  - The DRY principle<sup>30</sup>
  - Object creation and prototypes<sup>31</sup>
  - Different stack implementations<sup>32</sup>
  - "Class" construction examples<sup>33</sup>

<sup>&</sup>lt;sup>16</sup>notes/array\_collection\_methods.html

<sup>&</sup>lt;sup>17</sup>notes/function\_usage\_patterns.html

<sup>&</sup>lt;sup>18</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=33676

<sup>&</sup>lt;sup>19</sup>labs/1.html

<sup>&</sup>lt;sup>20</sup>notes/dev\_overview.html

<sup>&</sup>lt;sup>21</sup>notes/git version\_control.html

<sup>&</sup>lt;sup>22</sup>notes/git\_basics.html

<sup>&</sup>lt;sup>23</sup>notes/git commands review.html

<sup>&</sup>lt;sup>24</sup>notes/github\_basics.html

<sup>&</sup>lt;sup>25</sup>notes/git\_remotes\_branches.html

<sup>&</sup>lt;sup>26</sup>notes/github\_workflow.html

<sup>&</sup>lt;sup>27</sup>notes/project\_workflow.html

<sup>&</sup>lt;sup>28</sup>notes/object\_methods.html

<sup>&</sup>lt;sup>29</sup>notes/function\_calls\_and\_this.html

<sup>&</sup>lt;sup>30</sup>notes/dry.html

<sup>&</sup>lt;sup>31</sup>notes/object\_creation\_prototypes.html

<sup>&</sup>lt;sup>32</sup>notes/stack various.html

<sup>&</sup>lt;sup>33</sup>notes/class construction.html

- Object properties<sup>34</sup>
- Day 2
  - Survey of HTML<sup>35</sup>
  - Survey of CSS<sup>36</sup>
  - Introduction to the DOM (Document Object Model)<sup>37</sup>
  - Introduction to jQuery<sup>38</sup>

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

- Day 1
  - Lab 2: Writing Tests<sup>39</sup>
  - Assignment 6<sup>40</sup>
  - Lab 3: Linting, Tasks<sup>41</sup>
  - Assignment  $7^{42}$
  - Introduction to DOM Events<sup>43</sup>
  - Lab 4: Controllers, jQuery<sup>44</sup>
  - Timers<sup>45</sup>
- Day 2
  - Intro to Patterns: Iterator<sup>46</sup>
  - Intro to Patterns: Iterator (cont)<sup>47</sup>

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

- Day 1
  - Lab 5: Collections<sup>48</sup>
  - Design Patterns<sup>49</sup>
  - Patterns of code reuse<sup>50</sup>

<sup>&</sup>lt;sup>34</sup>notes/object\_properties.html

<sup>&</sup>lt;sup>35</sup>notes/html\_survey.html

<sup>&</sup>lt;sup>36</sup>notes/css\_survey.html

<sup>&</sup>lt;sup>37</sup>notes/dom\_intro.html

<sup>&</sup>lt;sup>38</sup>notes/jquery\_intro.html

<sup>&</sup>lt;sup>39</sup>labs/2.html

<sup>&</sup>lt;sup>40</sup>assignments/6.html

<sup>41</sup> labs/3.html

<sup>&</sup>lt;sup>42</sup>assignments/7.html

<sup>43</sup>notes/events\_intro.html

<sup>44</sup>labs/4.html

<sup>&</sup>lt;sup>45</sup>notes/events\_timers.html

<sup>&</sup>lt;sup>46</sup>notes/patterns\_iterator.html

<sup>&</sup>lt;sup>47</sup>notes/patterns\_iterator.html

<sup>48</sup>labs/5.html

<sup>&</sup>lt;sup>49</sup>notes/design\_patterns.html

<sup>&</sup>lt;sup>50</sup>notes/code\_reuse.html

- Day 2
  - Pattern: Observer<sup>51</sup>
  - Pattern: Command<sup>52</sup>
  - Pattern: Proxy<sup>53</sup>

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

- Day 1
  - Pattern: Visitor<sup>54</sup>
- Day 2
  - Pattern: Visitor (cont)<sup>55</sup>

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

**BREAK** 

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

- Day 1
  - Module Patterns: Node/CommonJS modules<sup>56</sup>
  - Using require.js<sup>57</sup>
- Day 2
  - UMD modules<sup>58</sup>
  - Lab 6: Double-Linked Lists, History<sup>59</sup>

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

- Day 1
  - Project proposals
  - Pattern: Composite<sup>60</sup>

<sup>&</sup>lt;sup>51</sup>notes/patterns\_observer.html

<sup>&</sup>lt;sup>52</sup>notes/patterns\_command.html

<sup>&</sup>lt;sup>53</sup>notes/patterns\_proxy.html

<sup>&</sup>lt;sup>54</sup>notes/patterns\_visitor.html

<sup>&</sup>lt;sup>55</sup>notes/patterns\_visitor.html

<sup>&</sup>lt;sup>56</sup>notes/pattern\_modules.html

<sup>&</sup>lt;sup>57</sup>notes/requirejs.html

<sup>&</sup>lt;sup>58</sup>notes/umd.html

<sup>&</sup>lt;sup>59</sup>labs/6.html

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

- Patterns: Adapter and Facade<sup>61</sup>
- MVC: Model-View-Controller<sup>62</sup>
- Day 2
  - Lab / Projects
  - Using Templates: Handlebars<sup>63</sup>

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

- Day 1
  - Project progress<sup>64</sup>
  - Project progress<sup>65</sup>
- Day 2
  - Project progress<sup>66</sup>
  - Projects review

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

- Day 1
  - Example of Designing a Model<sup>67</sup>
  - Basics of HTTP<sup>68</sup>
- Day 2
  - Introduction to XMLHttpRequest<sup>69</sup>
  - Projects progress

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

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

<sup>&</sup>lt;sup>61</sup>notes/patterns adapter facade.html

<sup>62</sup>notes/pattern\_mvc.html

<sup>&</sup>lt;sup>63</sup>notes/templates.html

<sup>&</sup>lt;sup>64</sup>notes/project\_steps.html

<sup>&</sup>lt;sup>65</sup>notes/project\_steps.html

<sup>66</sup>notes/project\_steps.html

<sup>&</sup>lt;sup>67</sup>notes/design\_example.html

<sup>68</sup>notes/http\_intro.html

<sup>&</sup>lt;sup>69</sup>notes/xhr\_intro.html

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

- Day 1
  - Projects progress
- Day 2
  - What we left out<sup>70</sup>

<sup>&</sup>lt;sup>70</sup>notes/left\_out.html