# Schedule

**Day 3** Lab 1<sup>6</sup>

A week-by-week breakdown of the material.

# Week 1 (09/04-9/08)

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    Day 1 A taste of statistics<sup>1</sup>
        Basic Terminology<sup>2</sup>

    Day 2 HW1 due Fri<sup>3</sup>
        Visualizing Variables<sup>4</sup>
        Quiz 1 due Sun<sup>5</sup>
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### Week 2 (09/11-09/15)

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Measures of Center<sup>8</sup>
Measures of Spread<sup>9</sup>
HW2 due<sup>10</sup>
Quiz 2<sup>11</sup>

Day 2 Data Collection<sup>12</sup>
Linear Transformations<sup>13</sup>
HW3 due<sup>14</sup>
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<sup>1</sup>notes/taste.html
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**Day 3** Lab  $2^{15}$ 

<sup>&</sup>lt;sup>2</sup>notes/basic\_terminology.html

<sup>&</sup>lt;sup>3</sup>assignments/hw1.html

<sup>&</sup>lt;sup>4</sup>notes/visualizing\_distributions.html

<sup>&</sup>lt;sup>5</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14001

<sup>&</sup>lt;sup>6</sup>https://hanoverstatslabs.github.io/resources/labs/Lab1Instructions.html

<sup>&</sup>lt;sup>7</sup>notes/percentiles.html

<sup>&</sup>lt;sup>8</sup>notes/measures center.html

<sup>&</sup>lt;sup>9</sup>notes/measures\_spread.html

<sup>&</sup>lt;sup>10</sup>assignments/hw2.html

<sup>11</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14002

<sup>&</sup>lt;sup>12</sup>notes/data\_collection.html

<sup>&</sup>lt;sup>13</sup>notes/linear\_transformations.html

<sup>&</sup>lt;sup>14</sup>assignments/hw3.html

<sup>&</sup>lt;sup>15</sup>https://hanoverstatslabs.github.io/resources/labs/Lab2Instructions.html

#### Week 3 (09/18-09/22)

**Day 1** Standardized scores<sup>16</sup>

**Day 2** Density Curves<sup>17</sup> HW4 due<sup>18</sup>

**Day 3** Lab 3<sup>19</sup>

#### Week 4 (09/25-09/29)

**Day 1** The Normal Distribution<sup>20</sup>

**Day 2** The Normal Distribution (cont) $^{21}$  Quiz  $3^{22}$ 

**Day 3** Lab 4<sup>23</sup> HW5 due<sup>24</sup>

#### Week 5 (10/02-10/06)

**Day 1** Relationships between two variables<sup>25</sup> HW6 due<sup>26</sup>

Day 2 MIDTERM (study guide<sup>27</sup>)

**Day 3** Lab 5<sup>28</sup>

# Week 6 (10/09-10/13)

**Day 1** Scatterplots and Correlation<sup>29</sup>

Quiz 4<sup>30</sup>

<sup>&</sup>lt;sup>16</sup>notes/linear\_transformations.html

<sup>&</sup>lt;sup>17</sup>notes/density\_curves.html

<sup>&</sup>lt;sup>18</sup>assignments/hw4.html

<sup>&</sup>lt;sup>19</sup>https://hanoverstatslabs.github.io/resources/labs/Lab3Instructions.html

<sup>&</sup>lt;sup>20</sup>notes/normal\_distribution.html

<sup>&</sup>lt;sup>21</sup>notes/normal\_distribution.html

<sup>&</sup>lt;sup>22</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14005

<sup>&</sup>lt;sup>23</sup>https://hanoverstatslabs.github.io/resources/labs/Lab4Instructions.html

<sup>&</sup>lt;sup>24</sup>assignments/hw5.html

<sup>&</sup>lt;sup>25</sup>notes/relationships.html

<sup>&</sup>lt;sup>26</sup>assignments/hw6.html

<sup>&</sup>lt;sup>27</sup>notes/midterm1\_study\_guide.html

<sup>&</sup>lt;sup>28</sup>https://hanoverstatslabs.github.io/resources/labs/Lab5Instructions.html

<sup>&</sup>lt;sup>29</sup>notes/scatterplot correlation.html

<sup>&</sup>lt;sup>30</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14010

```
Day 2 General Theory on Modeling and Data Fitting<sup>31</sup>
Linear Models and Regression Lines<sup>32</sup>
HW7 due<sup>33</sup>
```

**Day 3** Lab 6<sup>34</sup>

#### Week 7 (10/16-10/20)

**Day 1** Linear Models and Regression Lines (cont)<sup>35</sup>

**Day 2** The question of causation<sup>36</sup>
Quiz 5<sup>37</sup>

**Day 3** Lab 7<sup>38</sup>

#### Week 8 (10/23-10/27)

Day 1 Fall Break

**Day 2** Introduction to Probability<sup>39</sup>

**Day 3** Conditional Probability<sup>40</sup>
HW8 due<sup>41</sup>

# Week 9 (10/30-11/03)

**Day 1** Probability rules<sup>42</sup>
Independent Events<sup>43</sup>
Quiz 6<sup>44</sup>

<sup>&</sup>lt;sup>31</sup>notes/modeling\_general.html

<sup>&</sup>lt;sup>32</sup>notes/linear\_regression.html

<sup>&</sup>lt;sup>33</sup>assignments/hw7.html

<sup>&</sup>lt;sup>34</sup>https://hanoverstatslabs.github.io/resources/labs/Lab6Instructions.html

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

<sup>&</sup>lt;sup>36</sup>notes/correlation\_causation.html

<sup>&</sup>lt;sup>37</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14011

<sup>&</sup>lt;sup>38</sup>https://hanoverstatslabs.github.io/resources/labs/Lab7Instructions.html

<sup>&</sup>lt;sup>39</sup>notes/probability\_intro.html

<sup>&</sup>lt;sup>40</sup>notes/probability\_conditional.html

<sup>&</sup>lt;sup>41</sup>assignments/hw8.html

<sup>&</sup>lt;sup>42</sup>notes/probability rules.html

<sup>&</sup>lt;sup>43</sup>notes/independent\_events.html

<sup>44</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14014

```
Day 2 Tree Diagrams<sup>45</sup>
HW9 due<sup>46</sup>
Quiz 7<sup>47</sup>
```

# Week 10 (11/06-11/10)

**Day 1** Random Variables<sup>49</sup> HW10 due<sup>50</sup>

**Day 2** Review HW11 due<sup>51</sup>

**Day 3** Lab 8<sup>48</sup>

**Day 3 MIDTERM** (study guide<sup>52</sup>)

#### Week 11 (11/13-11/17)

**Day 1** Random Variables (cont)<sup>53</sup>

**Day 2** The Binomial Setting and Distribution  $^{54}$  Quiz  $8^{55}$ 

**Day 3** Project work HW12 due<sup>56</sup>

# Week 12 (11/20-11/24)

**Day 1** Mean and Standard Deviation of Random Variables<sup>57</sup> HW13 due<sup>58</sup>

#### Day 2 THANKSGIVING

# Day 3 THANKSGIVING

<sup>58</sup>assignments/hw13.html

<sup>45</sup> notes/decision\_trees.html
46 assignments/hw9.html
47 https://moodle.hanover.edu/mod/quiz/view.php?id=14018
48 https://hanoverstatslabs.github.io/resources/labs/Lab8Instructions.html
49 notes/random\_variables.html
50 assignments/hw10.html
51 assignments/hw11.html
52 notes/midterm2\_study\_guide.html
53 notes/random\_variables.html
54 notes/binomial.html
55 https://moodle.hanover.edu/mod/quiz/view.php?id=14020
56 assignments/hw12.html
57 notes/rv\_mean.html

#### Week 13 (11/27-12/01)

**Day 1** Combining Random Variables<sup>59</sup>
Mean and Standard Deviation of the Binomial<sup>60</sup>
Binomial: Approximating by Normal<sup>61</sup>
Quiz 9<sup>62</sup>

**Day 2** The Sample Mean / IID Setting<sup>63</sup>
HW14 due<sup>64</sup>
Quiz 10<sup>65</sup>

**Day 3** Inference I: Confidence Intervals<sup>66</sup>
HW15 due<sup>67</sup>

# Week 14 (12/04-12/08)

**Day 1** Inference II: Hypothesis Tests<sup>68</sup>
HW16 due<sup>69</sup>
Quiz 11<sup>70</sup>

**Day 2** TBA HW17 due<sup>71</sup>

**Day 3** Presentations

<sup>&</sup>lt;sup>59</sup>notes/rv\_combine.html <sup>60</sup>notes/binomial\_mean.html

<sup>&</sup>lt;sup>61</sup>notes/binomial\_mean.html

<sup>62</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14023

<sup>63</sup>notes/iid\_setting.html

<sup>&</sup>lt;sup>64</sup>assignments/hw14.html

<sup>65</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14026

<sup>66</sup> notes/confidence\_intervals.html

<sup>&</sup>lt;sup>67</sup>assignments/hw15.html

<sup>&</sup>lt;sup>68</sup>notes/hypothesis tests.html

<sup>&</sup>lt;sup>69</sup>assignments/hw16.html

<sup>&</sup>lt;sup>70</sup>https://moodle.hanover.edu/mod/quiz/view.php?id=14028

<sup>&</sup>lt;sup>71</sup>assignments/hw17.html