## Schedule

A week-by-week breakdown of the material.

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

### **Day 1** Basic Terminology<sup>1</sup>

Visualizing Variables<sup>2</sup>

Lab: Introduction to SPSS<sup>3</sup>

### **Day 2** Project Selection<sup>4</sup>

Percentiles<sup>5</sup>

Measures of Center<sup>6</sup>

Measures of Spread<sup>7</sup>

Lab: Describing Variables<sup>8</sup>

### **Day 3** Linear Transformations<sup>9</sup>

Density Curves<sup>10</sup>

Lab: Project Prep<sup>11</sup>

## **Day 4** The Normal Distribution 12

Relationships between two variables<sup>13</sup>

Lab: Investigating relationships between variables 14

# **Day 5** Scatterplots and Correlation<sup>15</sup>

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<sup>1</sup>notes/basic_terminology.html
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<sup>&</sup>lt;sup>2</sup>notes/visualizing\_distributions.html

<sup>&</sup>lt;sup>3</sup>labs/1.html

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

<sup>&</sup>lt;sup>5</sup>notes/percentiles.html

<sup>&</sup>lt;sup>6</sup>notes/measures\_center.html

<sup>&</sup>lt;sup>7</sup>notes/measures\_spread.html

<sup>8</sup>labs/2.html

<sup>&</sup>lt;sup>9</sup>notes/linear\_transformations.html

<sup>&</sup>lt;sup>10</sup>notes/density\_curves.html

<sup>&</sup>lt;sup>11</sup>labs/project\_prep.html

<sup>&</sup>lt;sup>12</sup>notes/normal\_distribution.html

<sup>&</sup>lt;sup>13</sup>notes/relationships.html

<sup>&</sup>lt;sup>14</sup>labs/3.html

 $<sup>^{15}</sup>$ notes/scatterplot\_correlation.html

### Week 2 (05/08-05/12)

**Day 1** General Theory on Modeling and Data Fitting<sup>16</sup> Linear Models and Regression Lines<sup>17</sup>

Lab: Regression lines, scatterplot smoothers 18

**Day 2 MIDTERM** (study guide<sup>19</sup>)

**Day 3** Data Collection<sup>20</sup>

The question of causation<sup>21</sup>

Lab: Practice 1<sup>22</sup>

**Day 4** Introduction to Probability<sup>23</sup>

Conditional Probability<sup>24</sup>

Probability rules<sup>25</sup>

Independent Events<sup>26</sup>

Lab: Continue Practice Lab 1

**Day 5** Tree Diagrams<sup>27</sup>

Random Variables<sup>28</sup>

The Binomial Setting and Distribution<sup>29</sup>

### Week 3 (05/15-05/19)

**Day 1** Mean and Standard Deviation of Random Variables<sup>30</sup> Combining Random Variables<sup>31</sup>

Day 2 Mean and Standard Deviation of the Binomial<sup>32</sup>

Binomial: Approximating by Normal<sup>33</sup>

<sup>&</sup>lt;sup>16</sup>notes/modeling\_general.html

<sup>&</sup>lt;sup>17</sup>notes/linear regression.html

<sup>&</sup>lt;sup>18</sup>labs/4.html

<sup>&</sup>lt;sup>19</sup>notes/midterm1\_study\_guide.html

<sup>&</sup>lt;sup>20</sup>notes/data\_collection.html

<sup>&</sup>lt;sup>21</sup>notes/correlation\_causation.html

<sup>&</sup>lt;sup>22</sup>labs/practice1.html

<sup>&</sup>lt;sup>23</sup>notes/probability\_intro.html

<sup>&</sup>lt;sup>24</sup>notes/probability\_conditional.html

<sup>&</sup>lt;sup>25</sup>notes/probability\_rules.html

<sup>&</sup>lt;sup>26</sup>notes/independent\_events.html

<sup>&</sup>lt;sup>27</sup>notes/decision\_trees.html

<sup>&</sup>lt;sup>28</sup>notes/random\_variables.html

<sup>&</sup>lt;sup>29</sup>notes/binomial.html

<sup>&</sup>lt;sup>30</sup>notes/rv mean.html

<sup>31</sup> notes/rv combine.html

<sup>&</sup>lt;sup>32</sup>notes/binomial\_mean.html

<sup>&</sup>lt;sup>33</sup>notes/binomial\_mean.html

**Day 3** The Sample Mean / IID Setting<sup>34</sup>

Day 4 MIDTERM 2 (study guide<sup>35</sup>)

Day 5 At conference Work on projects

## Week 4 (05/22-05/26)

**Day 1** Inference I: Confidence Intervals<sup>36</sup> Inference II: Hypothesis Tests<sup>37</sup>

Day 2 TBD

Day 3 TBD

Day 4 MIDTERM 3 (study guide<sup>38</sup>)

**Day 5** Presentations

<sup>&</sup>lt;sup>34</sup>notes/iid\_setting.html <sup>35</sup>notes/midterm2\_study\_guide.html

<sup>&</sup>lt;sup>36</sup>notes/confidence\_intervals.html

<sup>&</sup>lt;sup>37</sup>notes/hypothesis\_tests.html

<sup>&</sup>lt;sup>38</sup>notes/midterm3\_study\_guide.html