

# 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

### Day 3 Linear Transformations<sup>8</sup>

Density Curves<sup>9</sup>

The Normal Distribution<sup>10</sup>

Lab: Investigations related to normality

### Day 4 Relationships between two variables<sup>11</sup>

Scatterplots and Correlation<sup>12</sup>

Lab: Plotting relationships between variables

### Day 5 General Theory on Modeling and Data Fitting<sup>13</sup>

Linear Models and Regression Lines<sup>14</sup>

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<sup>1</sup>[notes/basic\\_terminology.html](https://www.stat.columbia.edu/gelman/notes/basic_terminology.html)

<sup>2</sup>[notes/visualizing\\_distributions.html](https://www.stat.columbia.edu/gelman/notes/visualizing_distributions.html)

<sup>3</sup>[labs/1.html](https://www.stat.columbia.edu/gelman/labs/1.html)

<sup>4</sup>[notes/projects.html](https://www.stat.columbia.edu/gelman/notes/projects.html)

<sup>5</sup>[notes/percentiles.html](https://www.stat.columbia.edu/gelman/notes/percentiles.html)

<sup>6</sup>[notes/measures\\_center.html](https://www.stat.columbia.edu/gelman/notes/measures_center.html)

<sup>7</sup>[notes/measures\\_spread.html](https://www.stat.columbia.edu/gelman/notes/measures_spread.html)

<sup>8</sup>[notes/linear\\_transformations.html](https://www.stat.columbia.edu/gelman/notes/linear_transformations.html)

<sup>9</sup>[notes/density\\_curves.html](https://www.stat.columbia.edu/gelman/notes/density_curves.html)

<sup>10</sup>[notes/normal\\_distribution.html](https://www.stat.columbia.edu/gelman/notes/normal_distribution.html)

<sup>11</sup>[notes/relationships.html](https://www.stat.columbia.edu/gelman/notes/relationships.html)

<sup>12</sup>[notes/scatterplot\\_correlation.html](https://www.stat.columbia.edu/gelman/notes/scatterplot_correlation.html)

<sup>13</sup>[notes/modeling\\_general.html](https://www.stat.columbia.edu/gelman/notes/modeling_general.html)

<sup>14</sup>[notes/linear\\_regression.html](https://www.stat.columbia.edu/gelman/notes/linear_regression.html)

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

### Day 1 The question of causation<sup>15</sup>

Introduction to Probability<sup>16</sup>

Lab: Regression lines, scatterplot smoothers

### Day 2 MIDTERM (study guide<sup>17</sup>)

Lab: Project work

### Day 3 Conditional Probability<sup>18</sup>

Probability rules<sup>19</sup>

Independent Events<sup>20</sup>

### Day 4 Tree Diagrams<sup>21</sup>

Random Variables<sup>22</sup>

Lab: Project work

### Day 5 The Binomial Setting and Distribution<sup>23</sup>

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

### Day 1 Mean and Standard Deviation of Random Variables<sup>24</sup>

Combining Random Variables<sup>25</sup>

Mean and Standard Deviation of the Binomial<sup>26</sup>

### Day 2 Binomial: Approximating by Normal<sup>27</sup>

### Day 3 The Sample Mean / IID Setting<sup>28</sup>

### Day 4 MIDTERM 2 (study guide<sup>29</sup>)

### Day 5 At conference

Work on projects

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<sup>15</sup>[notes/correlation\\_causation.html](#)

<sup>16</sup>[notes/probability\\_intro.html](#)

<sup>17</sup>[notes/midterm1\\_study\\_guide.html](#)

<sup>18</sup>[notes/probability\\_conditional.html](#)

<sup>19</sup>[notes/probability\\_rules.html](#)

<sup>20</sup>[notes/independent\\_events.html](#)

<sup>21</sup>[notes/decision\\_trees.html](#)

<sup>22</sup>[notes/random\\_variables.html](#)

<sup>23</sup>[notes/binomial.html](#)

<sup>24</sup>[notes/rv\\_mean.html](#)

<sup>25</sup>[notes/rv\\_combine.html](#)

<sup>26</sup>[notes/binomial\\_mean.html](#)

<sup>27</sup>[notes/binomial\\_mean.html](#)

<sup>28</sup>[notes/iid\\_setting.html](#)

<sup>29</sup>[notes/midterm2\\_study\\_guide.html](#)

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

**Day 1** Inference I: Confidence Intervals<sup>30</sup>

Inference II: Hypothesis Tests<sup>31</sup>

**Day 2** TBD

**Day 3** TBD

**Day 4** **MIDTERM 3** (study guide<sup>32</sup>)

**Day 5** Presentations

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<sup>30</sup>[notes/confidence\\_intervals.html](#)

<sup>31</sup>[notes/hypothesis\\_tests.html](#)

<sup>32</sup>[notes/midterm3\\_study\\_guide.html](#)