1. Formulas

The formula for Baye’s Rule, below, will be written on the front of Exam 1. A calculator that does 1-variable statistics is required for Exam 1; you are not allowed to use a cellphone as a calculator.

\[ P[A_j|B] = \frac{P[B|A_j] P[A_j]}{\sum_{i=1}^{n} P[B|A_i] P[A_i]} \quad \text{for } j = 1, 2, \ldots n \]

2. Homework and Projects Covered

- Section 1.2: 10, 11, 17-20, 29
- Section 1.3: 34(a)(b), 36, 39
- Section 1.4: 44, 47, 53, 54, 60
- Section 2.1: 3, 4, 8, 9
- Section 2.2: 11-15, 21, 22
- Section 2.3: 29-32, 34-35
- Section 2.4: 47-50, 53, 55, 60
- Section 2.5: 70, 74, 77

3. Definitions and Concepts

- Population
- Sample
- The objective of descriptive statistics
- The objective of inferential statistics
- Simple random sample
- Mean
- Standard deviation
- Five number summary
- Box plot (without outliers)
- Frequency and relative frequency distribution
- Frequency and relative frequency histogram
- Experiment, sample space, event, axioms of probability
- Complement, intersection, union and mutually exclusive events
- Venn diagrams
- Probabilities in sample spaces with equally-likely outcomes
- Conditional probability
- Law of total probability
• Bayes rule
• Independence

4. Items we WILL NOT cover on the test

• Enumerative vs. Analytic statistics
• Stem and leaf plots, dot plots
• Trimmed means
• Outliers

Enjoy your studies!