Probability & Statistics - Course Coverage
Elementary Statistics

Each chapter takes 2-3 weeks, including assessments.

Chapter 1 - Introduction to Statistics
1.1 intro
1.2 data classification
1.3 experimental design

Chapter 2 - Descriptive Statistics
2.1 frequency distributions and their graphs
2.2 more graphs and displays
2.3 measures of central tendency
2.4 measures of variation
2.5 measures of position

Chapter 3 – Probability
3.1 basic concepts
3.2 conditional probability and the multiplication rule
3.3 the addition rule
3.4 counting principles

Chapter 4 – Discrete Probability Distributions
4.1 probability distributions
4.2 binomial distributions
4.3 more discrete probability distributions

Chapter 5 – Normal Probability Distributions
5.1 intro
5.2 normal distributions: finding probabilities
5.3 normal distributions: finding values
5.4 sampling distributions and the central limit theorem
5.5 (optional) normal approximations to binomial

Chapter 6 – Confidence Intervals
6.1 confidence intervals for the mean (large samples)
6.2 confidence intervals for the mean (small samples)
6.3 confidence intervals for population proportion
6.4 confidence intervals for variance and standard deviation

Chapter 7 – Hypothesis Testing with One Sample
7.1 intro
7.2 hypothesis testing for the mean (large samples)
7.3 hypothesis testing for the mean (small samples)
7.4 hypothesis testing for proportions
7.5 hypothesis testing for variance and standard deviation

Chapter 8 - Hypothesis Testing with Two Samples
8.1 testing the difference between means (large independent)
8.2 testing the difference between means (small independent)
8.3 testing the difference between means (dependent samples)
8.4 testing the difference between proportions

Chapter 9 – Correlation and Regression (if time allows)
9.1 correlation
9.2 linear regression
9.3 measures of regression and prediction intervals
9.4 multiple regression (can only be done with computer access)