Introduction to Biostatistics and Bioinformatics

September 01   **Week 1**
Introduction to biostatistics and GraphPad Prism

Hypothesis testing for means

September 08   **Week 2**
General hypothesis testing framework and one-sample tests

September 15   **Week 3**
Hypothesis testing for two groups

September 22   **Week 4**
Confidence intervals, power analysis, and effect size

September 29   **Week 5**
One-way ANOVA and post-hoc comparisons

October 06   **Week 6**
Repeated-measures ANOVA

October 13   **Week 7**
Non-parametric hypothesis tests for one or two groups

October 20   **Week 8**
Survival analysis

Predicting outcomes

October 27   **Week 9**
Simple linear regression

November 03   **Week 10**
Simple classification and ROC curves

November 10   **Week 11**
Review Day (introduce final review project)

Dealing with many variables

November 17   **Week 12**
Factorial analysis of variance, understanding interactions

November 24   **No Class, Happy Thanksgiving**

December 01   **Week 13**
Bioinformatics I: Dimension reduction

December 08   **Week 14**
Bioinformatics II: Clustering