**What to Study for BINF702 Comp Spring 2025.**

**Based on BINF702 TENATIVE SCHEDULE SPRING 2023**

**Material that is of particular importance is highlighted in yellow.**

**Week 1 1/23/23**

Biological Data Handout

R Syntax and Development Handout

Golub Handout

Golub Paper

Krijnen Chpt1 Exercises

**Week 2 1/30/23**

Data Display and Descriptive Statistics

Microarrays

Krijnen Chapter 2 Exercises

**Week 3 2/6/23**

Probability Problems Worksheet

Introduction to KnitR

**Week 4 2/13/23**

Statistical Distributions

Krijnen Chapter3 Exercises

**Week 5 2/20/23**

Estimation and Inference

Krijnen Chapter4 Exercises

**Week 6 2/27/23**

**Linear Models**

Project Discussions

Krijnen Chapter 5 Exercises

ISLR Chpt. 3 Lab

**Week 7 3/6/23**

ISLR Chapter 2

Time to discuss and work on projects.

Micro Array Analysis Left to Student

Krijnen Chapter 6 Exercises Canceled

**Take home Midterm Provided**

**Week 8 3/20/23**

**Cluster Analysis (hierarchical clustering, kmeans clustering, dendrograms, bootstrap)**

Krijnen Chapter 7 Exercises

ISLR Chpt. 10 Lab

**Project Title and Abstract Due**

**Week 9 3/27/23**

**Classification Methods-I (Trees, Visualization of Trees, Random Forests, Variable Importance, Support Vector Machines, Training and Testing including confusion matrices, PFA, PD, Type I, and Type 2** errors, in the 2 class case tables from the probability section)

**Take home Midterm Due**

Krijnen Chapter 8 Exercises

**Week 10 4/3/23**

**Classification Methods – II (knn)**

Project Q & A Session

ISLR – Chpt. 4 Lab

**Week 11 4/10/23**

**Take Home Final Provided**

Rshiny and Sequence Analysis Chapter 9

Krijnen Chpt. 9 Exercises Not to be Submitted.

RShiny Lab/HWNot to be Submitted.

**Week 12 4/17/23**

Running at Scale

Project Q & A Session

Running at Scale Lab/HW Not to be Submitted

**Week 13 4/24/23 Student Presentations – Session 1**

**All Project Slides Due**

**Week 14 5/1/23 Student Presentations – Session 2**

**All Project Writeups Due**

**Take Home Final Due by 11:59 pm Monday 5/1/23**