Spring 2-1-2017

STAT 544.01: Statistical Learning

Brian M. Steele
University of Montana - Missoula, brian.steele@umontana.edu

Let us know how access to this document benefits you.

Follow this and additional works at: https://scholarworks.umt.edu/syllabi

Syllabus: Math 544 Statistical Learning

Instructor: Brian Steele. Office: Math 314. 243-5396. `brian.steele@umontana.edu`

Office hours: Monday, Wednesday, 2:30-3:30, and Tuesday 1:00-2:00, and by appointment.

Course Format: Two meetings per week: Monday and Wednesday 1:00-2:20 p.m., NAC 201.

Learning Outcomes

1. Understand the foundational principles of statistical learning.

2. Develop practical experience with statistical learning methods.

3. Become adept at using the statistical package `R`.

Course Content We shall cover most, but not all of the material in James, G., Witten, D., Hastie, T. and Tibshirani, R. An Introduction to Statistical Learning. (Available online from the Mansfield Library Electronic Collection). The last 2 to 4 weeks will be dedicated to neural networks. The goal is for students to program a neural net in `R` or `Python` and apply the program for prediction.

Textbook: *An Introduction to Statistical Learning* James, G., Witten, D., Hastie, T. and Tibshirani, R.

Prerequisites: STAT 452 or M 422 or consent of the instructor

Homework: Homework exercises will be assigned roughly biweekly and usually will be due Monday at 3:30 p.m.

Grading: One midterm and final (of the take-home variety), 25% each, and 50% homework.

Additional Information: April 3 is the DEADLINE for students to drop/add a course, change sections, change their grading option from Credit/No Credit to a letter grade (or vice versa), or change credit in a variable credit course. From April 4 until May 5, a student is allowed to make these changes only with the signature and recommendation of the instructor. In the case of drops only, the signature of the Dean of the students major (who may decide against your recommendation) is also required. The final deadline for all of these changes is May 5.