Stat 215B

Lectures: Tu/Th 2-3:30, 332 Evans
Discussion/Lab: F 10-12, 332 Evans
Final Exam: M May 9, 2011; 11:30-2:30

Instructor: Elizabeth Purdom
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Office Hours: Tu 3:30-5:00

GSI: Yu-Jay Huoh
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Office Hours: TBA

Online: Materials, announcements, homework, etc. will be available through bspace

Textbook:
Online Readings
Elements of Statistical Learning, Hastie, Tibshirani and Freedman
(available online at Springer Link)

Prerequisites: 215A, Linear Algebra, Intro. Probability and Statistics

Assignments:
There will be homeworks (20%), data labs (50%), a midterm (15%) and final exam/lab (15%).

Discussions: There will be (class size permitting) several discussions for which students are expected to come prepared (usually readings, but sometimes exercises or brief data analysis). Participation is required and will count toward the data lab portion of the grade.

Scribing:
Students will pair up and transcribe the notes for assigned class(es). This will count as points toward the homework portion of grade.

Policies

Late Assignments:

Late assignments will not be accepted except with my approval, which will be only given for truly extenuating circumstances. I expect any requests to be done as timely as possible.

Email:

1) If you wish me to read your email, the subject of your email must start with '215B'
2) I do not explain material over email and will not respond to emails with such requests. Please come to office hours, discussion section, or GSI's office hours (or schedule another time to meet if you have irreconcilable conflicts with the office hours).
3) I respond to email regarding the class roughly once a day, and almost never in the evening nor weekend.

Academic Honesty Policy

In fairness to students who put in an honest effort, cheaters will be harshly treated. Any evidence of cheating will result in a score of zero (0) on the **entire** assignment or examination.

For assignments, unless otherwise indicated, students may *collaborate* with other students also in this course, but may not do part or all of the assignment for another student. All write ups must be done independently. Nor may students receive help from any other person not affiliated with this course as a student, a GSI, or an instructor. Obtaining and/or using solutions from previous years or from the internet, if such are available, is considered cheating.

For exams, cheating includes but is not limited to bringing notes or written or electronic materials into an exam or quiz, using notes or written or electronic materials during an exam or quiz, copying off another person's exam or quiz, allowing someone to copy off of your exam or quiz, and having someone take an exam or quiz for you.

Incidences of cheating will be reported to Student Judicial Affairs, which may administer additional punishment.

Disability

If you need accommodations for any physical, psychological, or learning disability, please speak to me after class or during office hours.

STAT 215B Syllabus

Elizabeth Purdom, Spring 2011

Week	Public	Readings
Jan 17	• General Administration / Introduction • Overview of OLS • ANOVA with 1-variable • Estimability/Contrasts/Multiple Testing	1. Bailey Chpt2,5 (Geometric ANOVA) 2. Myers & Milton, Chpt 5,6 (ANOVA, estimability, etc) 3. Venables & Ripley, 6.2 (transformations in R) 4. Christensen, Chpt 5 (multiple testing)
	• ANOVA with 2+ variables • Intro experimental Design • *Discussion(P): Fisher paper*	Faraway LM Chpt15-16 (review of designs) For discussion: Fisher Paper
Jan 31	Factorial Designs: multiple treatment factors **Guest Lecture**	BHH Chpt5-6
Feb 7	Optimal Design Nesting of Treatment Effects (split-plot design)	Cox Chpt7 Lohr 1995 CobbChp7.3 Bailey 1981 Payne 1992
Feb 14	Random Effects • Balanced Design • General Model	Faraway ELM Chpt8-9 Molenbergs Chpt3-7,9
Feb 21	Random Effects Models Discussion (P)	
Feb 28	Optimization Review	Givens Chpt2,4 Seale Chpt8
Mar 7	Midterm (Mar 8) Splines	Hastie Chpt 5 Welham2007?
Mar 14	Splines Discussion (P)	For discussion: Bumbrack & Rice
Mar 21	SPRING BREAK	
Mar 28	Classification Discussion (P)	Hastie Chpt 4
Apr 4	SVM	Hastie Chpt 12
Apr 11	CART	Hastie Chpt 9.1-9.2

Apr 18	CART Bagging/Random Forests	Hastie Chpt 15
Apr 25	Boosting Discussion(P)	Hastie Chpt 10
May 2		
May 9	May 9th: Final Exam: 11:30-2:30	