

AMS 7: Statistical Methods for the Biological, Environmental and Health Sciences

Tentative syllabus and reading list

Lecture Number	Date	Topic	Readings (Chapters in DD)
1	24 Sep	Introduction; populations and samples	1
2	29 Sep	Data types; graphical descriptive methods (histograms, bar charts)	2
3	1 Oct	Numerical descriptive methods: measures of center (mean, median, mode) and spread (standard deviation, variance)	3
4	6 Oct	Using the normal distribution descriptively; controlled experiments	4,5
5	8 Oct	Observational studies	6
6	13 Oct	Probability; conditional probability	7, 8
7	15 Oct	Probability models for sums	9
8	20 Oct	Probability models for means	10
9	22 Oct	Statistical models for means; interval estimation (continuous outcomes)	11
10	27 Oct	Interval estimation (dichotomous outcomes)	—
11	29 Oct	Sample size determination; hypothesis testing	—
12	3 Nov	Pitfalls of hypothesis testing; power	—
13	5 Nov	Two-sample problems (continuous outcomes)	—
14	10 Nov	Two-sample problems (discrete outcomes)	—
15	12 Nov	Simple correlation	—
16	17 Nov	Simple linear regression	—
17	19 Nov	Regression prediction	—
18	24 Nov	One-way analysis of variance (ANOVA)	—
—	26 Nov	holiday	—
19	1 Dec	ANOVA; categorical data analysis	—
20	3 Dec	Categorical data analysis	—

If the final exam is an in-class exam, it will take place on **Tue 8 Dec 2009 from 8–11am** in a room to be announced; if it's a take-home exam, it will be handed out on 3 Dec 2009 in class and due one week later.

Please note, as mentioned in class, that no discussion sections or labs will take place on the following days: 11 Nov and 23–27 Nov 2009 (lecture will occur as usual on Tue 24 Nov 2009).