

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	6 Jan	Introduction; populations and samples	1
2	8 Jan	Data types; graphical descriptive methods (histograms, bar charts)	2
3	13 Jan	Numerical descriptive methods: measures of center (mean, median, mode) and spread (standard deviation, variance)	3
4	15 Jan	Using the normal distribution descriptively; controlled experiments	4, 5
5	20 Jan	Observational studies	6
6	22 Jan	Probability; conditional probability	7, 8
—	27 Jan	no lecture	
7	29 Jan	Probability models for sums	9
8	3 Feb	Probability models for means	10
9	5 Feb	Statistical models for means; interval estimation (continuous outcomes)	11
10	10 Feb	Interval estimation (dichotomous outcomes)	—
11	12 Feb	Sample size determination; hypothesis testing	—
12	17 Feb	Pitfalls of hypothesis testing; power	—
13	19 Feb	Two-sample problems (continuous outcomes)	—
14	24 Feb	Two-sample problems (discrete outcomes); simple correlation	—
15	26 Feb	Simple linear regression	—
16	3 Mar	Regression prediction	—
17	5 Mar	One-way analysis of variance (ANOVA)	—
18	10 Mar	ANOVA; categorical data analysis	—
19	12 Mar	Categorical data analysis	—

If the final exam is an in-class exam, it will take place on **Thu 19 Mar 2009 from 7:30–10:30pm** in the Baskin Auditorium and a room to be announced; if it's a take-home exam, it will be handed out on 12 Mar 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: 19 Jan and 16 Feb 2009.