

AMS 7: Statistical Methods for the Biological and Environmental Sciences

Tentative syllabus and reading list

Lecture Number	Date	Topic	Readings (Chapters in T&T)
1	4 Jan	Introduction; populations and samples	1
2	9 Jan	Data types; graphical descriptive methods (histograms, bar charts)	1, 2
3	11 Jan	Numerical descriptive methods: measures of center (mean, median, mode) and spread (standard deviation, variance)	2
4	16 Jan	Using the normal distribution descriptively; controlled experiments	5, 1
5	18 Jan	Observational studies	1
6	23 Jan	Probability; conditional probability	3
7	25 Jan	Probability models for sums	5
8	30 Jan	Probability models for means	5
9	1 Feb	Statistical models for means; interval estimation (continuous outcomes)	6
10	6 Feb	Interval estimation (dichotomous outcomes)	6
11	8 Feb	Sample size determination; hypothesis testing	7
12	13 Feb	Pitfalls of hypothesis testing; power	7
13	15 Feb	Two-sample problems (continuous outcomes)	8
14	20 Feb	Two-sample problems (discrete outcomes)	8
15	22 Feb	Simple correlation	9
16	27 Feb	Simple linear regression	9
17	1 Mar	Regression prediction	9
18	6 Mar	One-way analysis of variance (ANOVA)	11
19	8 Mar	ANOVA (continued)	11
20	13 Mar	Categorical data analysis	10
21	15 Mar	Categorical data analysis (continued)	10

If the final exam is an in-class exam, it will take place on **Wed 21 Mar from noon to 3pm** in BE 152; if it's a take-home exam, it will be handed out on 15 Mar in class and due one week later.

Please note, as mentioned in class, that no discussion sections or labs will take place on the two holidays this quarter: Mon 15 Jan and Mon 19 Feb 2007.