

Professor: Brett Goodwin

Phone: 777-2757

Lectures: Mon., Wed. & Fri. 11:00-11:50, Starcher 105

Web page: via Blackboard (lecture outlines, assignments, etc.)

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Textbook:

Zar, J.H. 1999. *Biostatistical Analysis*, 4th ed. Prentice Hall, Upper Saddle River, NJ.

Prerequisites: BIOL 150 and BIOL 151

Course Description and Objectives:

The objective of this course is to introduce you to the key concepts and techniques used in the statistical analysis of data, primarily biological data. We will focus on analyzing real data sets and the interpretation and presentation of those analyses.

By the end of the course you should be able to interpret and critically assess standard statistical analyses in the literature and perform standard statistical analyses on biological data.

Evaluation:

	A ≥ 90%
In class work.....15%	B ≥ 80%
Assignments (5% each).....65%	C ≥ 70%
Final Exam (Take home).....20%	D ≥ 60%

In class work: Throughout the semester we will have in class activities to help you learn the material. Many of these will be handed in for grading.

Assignments: There will be 14 weekly assignments on the material covered in class. Assignments will be available on Blackboard a week before they are due. All assignments will be due in my office by 5:00 PM on the Thursday of the week they are due, late assignments will not be accepted. Assignments must be done on a word processor – hand-written assignments will not be accepted. Many of the assignments will ask you to analyze real data sets. More details about how you will be able to do that will be forthcoming. I will drop the lowest assignment for the semester.

Final Exam: The final exam will be a take home exam. It will cover the entire course. The exam will be much like the weekly assignments only covering more material (and therefore take longer to do).

Tentative Lecture Schedule:

Week of	Topic	Assign. Due	Reading Zar
Jan. 9	Data, Samples, and Populations		1.1-1.2, 2.1-2.4
Jan. 16	Martin Luther King Jr. Day (Jan. 16 - no class) Descriptive Statistics		3.1-3.5, 4.1-4.7
Jan. 23	Presenting Results and Probability	1	1.3-1.4, 5.1-5.7, 7.4
Jan. 30	The Normal Distribution	2	6.1-6.5
Feb. 6	One- Sample Hypotheses	3	7.1-7.3, 13.1-13.4
Feb. 13	Two- and Paired-Sample Hypotheses	4	8.1-8.2, 8.9-8.10, 9.1-9.3, 9.5
Feb. 20	President's Day (Feb. 20 - no class) ANOVA	5	10.1-10.2, 10.4, 11.1-11.7
Feb. 27	Two-Factor ANOVA	6	12.1-12.6, 12.8-12.11
Mar. 6	Multi-Factor ANOVA	7	14.1-14.6,
Mar. 13	Spring Recess (no classes)		
Mar. 20	Nested ANOVA	8	15.1-15.3
Mar. 27	Correlation and Simple Linear Regression	9	17.1-17.6, 17.10, 19.1-19.3, 19.9
Apr. 3	Polynomial and Multiple Regression	10	20.1-20.13, 21.1-21.3
Apr. 10	Multiple Regression con't Easter Holiday (Apr. 14 - no class)	11	
Apr. 17	Easter Holiday (Apr. 17 - no class) Goodness of Fit	12	22.1-22.9
Apr. 24	Contingency Tables	13	23.1-23.8
May 1	Finish up, Review Reading & Review Day (May 5)	14	
May 8	Exam Week	Final	

Policies:

If you have emergency medical information to share with me, if you need special arrangements in case the building must be evacuated, or if you need accommodations in this course because of a disability, please make an appointment with me as soon as possible. If you plan to request disability accommodations, you are expected to register with the Disability Support Services (DSS) office (190 McCannel Hall, 777-3425 v/tty).

Academic dishonesty (see the Code of Student Life) will result in a mark of 0 on the exam/assignment. A second act of academic dishonesty will result in a mark of 0 in the course.

If you are a **graduate** student and wish to take this course for **graduate** credit you need to identify yourself to me immediately.