

University of Florida
College of Public Health and Health Professions and College of Medicine
GMS 6861: Introduction to Biostatistics I
Fall 2012

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Class Schedule: Thursday 8:30-11:30am @ McKnight Brain Institute (MBI) Room L3-101
NO CLASS ON THURSDAY, SEP 13, 2012

Office Hours: 10-11:30am Tuesdays, 3:15-4:15pm Thursday or by appointment

Course Webpage: <https://lss.at.ufl.edu/>

I will post the lecture slides, homework assignments, data sets and other material on the course web site in Sakai (e-learning: <https://lss.at.ufl.edu/>). I will try to have the lecture slides up before the end of the day the prior Thursday so you can print copies for class if you want.

COURSE DESCRIPTION AND GOALS

This course covers basic probability and distribution concepts and statistical analysis methods, including descriptive measures, point estimation, hypothesis testing (e.g., t test, analysis of variance, chi-square test etc.), confidence intervals, simple linear regression and some nonparametric methods. SPSS will be introduced for basic statistical analyses.

This is an introductory course for researchers in the Health Science Center who require a familiarity with statistics to plan experiments and analyze data in their research. At the end of the class, students are expected to understand basic statistical concepts and methods, be able to use appropriate methods for various real problems, and interpret statistical results.

COURSE MATERIALS

Required: Introductory Applied Biostatistics (with CD-ROM) by Ralph D'Agostino Sr., Lisa Sullivan, and Alexa Beiser (Hardcover - Mar 16, 2005). I'll assign homework from this book, so you must have access to a copy.

Recommended: Fundamentals of Biostatistics, 6th Edition by Bernard Rosner, Duxbury Publications, 2006. Belmont, California. This book is similar to the required text but treats the topics in more detail. I will use examples from it in class and assign homework from it, but I will post these problems on the web site, so you will not need the book to do the homework.

Software: You will need access to a basic statistical software package to do much of the homework for this class and to complete your final project. You can use any package you like, but I will demonstrate how to use SPSS in class. You can lease SPSS for 6 months at <http://www.onthehub.com/spss/> (and other web sites) for about \$50.

COURSE REQUIREMENTS

Homework: Homework will be assigned approximately once a week. Homeworks will contain both analytical problems and data analysis problems. Students are encouraged to consult one another on homework problems, but everyone should turn in their own homework, and no “blind copying” permitted.

Homework will be collected **at the beginning of class on the date it is due**. It should be **neat, all work should be shown, and no late homework accepted unless prearranged with the instructor. There will be no exceptions to this policy.**

Midterm Exam: We will have a midterm exam during this semester. It is tentatively scheduled on October 11, 2012 and will be an **in-class** and closed book test.

Final Project: For your final project, you will conceive of some form of statistical study, gather data, analyze it, present your findings to the class and turn in a written report. You can work in teams of up to 3 people, or you can work alone.

Topics are wide open. The point is to use statistical methods you have learned in class to draw conclusions from a set of real data. If you are currently doing research, or have data from a past experiment that has not been analyzed, you can use this material for your final project. If you do not have such data, you can devise a small project in your field (or outside your field), collect some data and analyze it. Alternatively, you can find a publicly available data source, come up with a set of hypotheses and use that data to test them. For example, the National Health and Nutrition Examination Survey (NHANES, <http://www.cdc.gov/nchs/nhanes.htm>) has a wealth of free clinical data. The National Inpatient Sample (NIS, <http://www.hcup-us.ahrq.gov/nisoverview.jsp>), is also fertile ground if your department has purchased access to it. If you need help coming up with a topic, I will be happy to talk with you about it.

Project proposal due October 26: In a one-page summary of your project, include the names of the members of your group, your research questions, a description of your data, and your proposed statistical analysis methods. I’ll review the proposals one-on-one with each group during part of the Nov. 1 class.

Final presentation: All groups will present their projects in class on Nov. 29.

Written report due Dec. 11: Turn in a hard copy to me in my office, or send the report by email.

GRADING

All homework and exams will be graded on a scale of 0-100. A numerical final score on this scale will be determined according to the following breakdown:

Homework	50%
Midterm Exam	25%
Final Exam	25%

The numerical final score will be converted to the letter grades according to the following scale:

93-100 = A	90-92.9 = A-	85-89.9 = B+
80-84.9 = B	75-79.5 = B-	70-74.9 = C+
65-69.5 = C		
Score below 65 will be handled on a case-by-case basis		

Depending on overall class performance, these ranges may be adjusted (but only downward – criteria will only become easier, not harder).

ATTENDANCE POLICY

Students are strongly recommended to attend the classes. It is understandable if you would like to skip one or two classes to attend the conferences or meetings of your interest. But be sure to let me know in advance. If you have difficulty in catching up with the missed materials, feel free to contact me and we can make appointments to discuss them.

MAKE-UP POLICY

Make-up Policy: No late assignments or tests will be allowed, except for urgent need.

STUDENTS WITH DISABILITIES

Students requesting a disability accommodation must first register with the Dean of Students Office, which will provide documentation to the student. The student should then provide this documentation to the instructor.

ACADEMIC INTEGRITY

Students are expected to act in accordance with the University of Florida policy on academic integrity (see Graduate Student Handbook for details). Cheating or plagiarism in any form is unacceptable and inexcusable behavior.

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

COUNSELING AND STUDENT HEALTH

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Visit their web sites for more information: <http://www.counsel.ufl.edu/> or <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: www.health.ufl.edu/shcc

Crisis intervention is always available 24/7 from:

Alachua County Crisis Center: (352) 264-6789.

BUT – Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.