MATH/STAT 319
Applied Statistics in Science
Spring 2006

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Office Hours

Instructor:	M 1:00 p.m. – 2:00 p.m., W 1:00 p.m. – 2:00 p.m.
T.A.:	T 9:00 a.m. – 10:00 a.m., R 9:00 a.m. – 10:00 a.m.

Meeting Times and Location

M W F 2:30 p.m. – 3:20 p.m.
106 Boucke

Textbook (Required)

Mathematical Statistics and Data Analysis – Second Edition, John A. Rice, Duxbury Press, 1995. This is the same text as used in MATH/STAT 318.

Course Website

ANGEL (www.angel.psu.edu).

Prerequisite

MATH/STAT 318 – Elementary Probability.

Course Description

This course will cover the principles and methods of statistical inference, estimation and testing hypotheses, regression and correlation analysis, analysis of variance (ANOVA), and computer analysis. This equates to a majority of the content of chapters 6-15 of the text. An outline of the lecture dates and content is provided at the end of the syllabus. The outline of lectures includes the sections you are responsible for reading during that week. I highly encourage you to read the assigned sections before the lecture to aid in your understanding of the material. During the lectures, I encourage you to ask any questions as I find this to be more beneficial for you as students.

Homework

The best way to learn this material (as with any other course) is to keep up with the homework assignments. Homework will be assigned almost every week and will be due on Friday. The actual dates will be made clear once the assignment is posted. There will be a total of 12 assignments and I will count your best 10 of 12. I will ***not*** accept late homework assignments because the solutions will be posted the evening of the due date. This is the reason why I will drop your 2 lowest scores. You are encouraged to work together and discuss the homework, but you must submit your own solutions. Make sure your solutions provide enough details and not just an answer or else it ***will*** be marked wrong. Please be courteous and make sure if you have multiple pages to staple them! The T.A. will be in charge of grading the homework and any questions you have about the grading should be addressed to them during their office hours. Also, ***do not*** wait until the due date of the homework to ask questions. Make sure you attempt it well enough ahead of time so you may seek help from the instructor or T.A. We have office hours for a reason!

Labs and Computing

There will be a total of 5 labs given throughout the semester. Each of the labs will be due on a Monday. They will require you to use the statistical package MINITAB, which can be found on any university computer. For the labs, you will be required to turn in your MINITAB output and to type up all of your solutions to the questions asked. My suggestion is to copy the MINITAB output into a program like Microsoft Word and then type your solutions beneath the output. However you decide to proceed, make sure it is clear for the T.A. what output you are referring to when answering the questions. I will allow you to work with a partner and turn in one lab between the two of you. The data sets to be used are those that are on the diskette included with the textbook. Since most of the university computers no longer have diskette drives on them, the data sets will be posted on ANGEL. The T.A. will be in charge of grading the labs and any questions you have about the grading should be addressed to them during their office hours.

Exams

There will be a total of 2 midterms and the final. All three exams will be administered in class. The dates for the exams are noted on the course calendar at the end of the syllabus. The exams will involve solving various statistical questions as well as interpreting MINITAB output for various statistical procedures. For each exam, you will be provided formula sheets to use as well as the necessary statistical tables. The first midterm exam will cover the material in chapters 6-8 in the text. The second midterm exam will cover the material in chapters 9-11 of the text. The final exam will be comprehensive. A scientific calculator will be necessary! No early/late exams will be administered without a legitimate excuse and documentation! As with the homework and labs, the T.A. will be in charge of grading the exams, but any questions you have about the grading can be addressed to them or the instructor.

Integrity Statement

All Penn State and Eberly College of Science policies regarding academic integrity apply to this course. Refer to http://www.science.psu.edu/academic/Integrity/index.html for details.

Grading Policy

The final grades will be calculated as follows:

Homework (Best 10 of 12)	20%
Labs (5)	15%
Midterm Exams (2)	40%
Final Exam	25%

The final grades will be determined as follows:

A	[94, 100]
A-	[88, 94)
B+	[84, 88)
B	[80, 84)
B-	[76, 80)
C+	[72,76)
C	[60,72)
D	[55, 60)
F	[0, 55)

Important University Dates

Final Exam Conflict Filing Period	2/13/06 – 2/26/06
Late Drop Deadline	4/7/06
Withdrawal Deadline	4/28/06

Final Notes

- Make sure cell phones are turned off during lecture.
- Don't read the newspaper during lecture.
- If you plan on leaving lecture early, please sit close to the exit and go as quietly as possible. I became very annoyed during lecture last semester when people came to ask homework questions, turned it in, and then left.