STAT 322 Statistical Analysis for Engineers and Scientists  
Spring 2005  

MTWR 8:10-9:00am

Dr. Karen J. McGaughey  (pronounced “McGoy”)  
Office: 25-104  
Phone: x66578  
Email: kmcgaugh@calpoly.edu

Office Hours:  M: 2:10-3:00 pm  
T: 3:10-4:00 pm  
W: 11:10-12:00 pm, 2:10-3:00pm  
Th: 3:10-4:00 pm  
Otherwise by appointment

Course Overview: Statistics is a powerful scientific tool. This course will expand on what you learned in STAT 321. You will learn more statistical concepts and methods, more of the mathematical theory, and more of the applications of statistics. STAT 322 differs from STAT 321 in that it will deal almost exclusively with the analysis and drawing of conclusions from data, as opposed to probability.

What will you need from STAT 321?

- Descriptive statistics
- Basic ideas of probability
- Random variables
- Expected value and variance
- Binomial and normal probability distributions
- Sampling distributions (CLT)
- Confidence intervals for the mean

Required Text & Materials:

- Probability and Statistics for Engineering and the Sciences, 6th ed, Jay Devore
- Scientific calculator
- Computer Access – Course notes will be posted on Blackboard by chapter. You are encouraged to download a copy of the notes before you come to class to facilitate note taking. You will need access to Minitab, Excel, and the internet outside of class. Free copies of Minitab are available online via my.calpoly.edu.
- You are expected to bring your notes and calculator to class everyday. (3-ring binder)

Important Dates:  
Wednesday, April 6 – Last day to enter ePermit numbers  
Thursday, April 7 – last day to add/drop a class

Homework: A problem set will be handed out on Tuesdays. These problems must be completed and turned in by the next Tuesday at the beginning class. Some of these will be problems from the text and others will be longer, more involved data analysis type problems which may involve the use of the computer package Minitab. Homework assignments will constitute 15% of your course grade. Only a selected few of the problems will be graded; you will not know ahead of time which problems those are. It is in your best interest to do ALL of the problems. There will be 8 graded homework assignments. The lowest 2 homework scores will be dropped from your final grade. Exam questions will be based on these homework problems.

NO late homework will be accepted. Homework which is not stapled, or done in a neat, professional manner will NOT be graded. Problems which require plots or graphs must be done in Minitab or Excel.
**Exams:** There will be 2 midterm exams which will be closed note and closed book. Each midterm will constitute 25% of your course grade. You will need an 8 ½ x 11 inch blue book for each of the midterms. A formula sheet will be provided for each exam. You may use a calculator on the exams. **Make-up exams will be given only for very good reasons when submitted in writing at least one week prior to the exam. Make-up exams must be taken before the regularly scheduled exam time.** Should you fall ill or have some unavoidable conflict the day of an exam email me immediately or call my office or the Stat office (756-2709). With documented evidence of your illness or conflict, arrangements will be made to rescale the evaluation process.

**Final Exam:** The final exam will be a closed note, closed book, comprehensive exam. The final will constitute 30% of your course grade. You will need an 8 ½ x 11 inch blue book for the final exam. A formula sheet will be provided. **There will be no make-up exams given for the final exam.**

**Final Exam Date & Time:**

Tuesday, 6/7  7:10 – 10:00 am

**Grades:**

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
<td>90 – 100%</td>
<td>A</td>
</tr>
<tr>
<td>Midterm #1</td>
<td>25%</td>
<td>80 – 89</td>
<td>B</td>
</tr>
<tr>
<td>Midterm #2</td>
<td>25%</td>
<td>70 – 79</td>
<td>C</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
<td>60 – 69</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>59 &amp; below</td>
<td>F</td>
</tr>
</tbody>
</table>

To be successful in this class I strongly recommend that you do each of the following:

- Attend class every day
- Participate in class
- Ask questions
- Do all suggested homework problems as they are assigned (Start them early!)
- Read the corresponding sections of the text as we cover the material
- Understand all of the material in the lecture notes, as well as how to do all assigned problems.
- Take all exams
- Spend approximately 8 hours/week outside of class reviewing and studying this material
- Visit me during office hours immediately if you encounter a problem.

You are responsible for your own learning. If you are not willing to put in the time and the effort, you will not be successful in this class.

**Academic Honesty:** It is assumed that all work turned in for this course is the work of the student whose name appears on that work. You may work with your classmates on homework problems, however, assignments that look too much alike will be considered a violation of the academic honesty policy. I take any form of cheating seriously. If a cheating incident arises, you will receive an F in the course and I will report the incident to the Office of Judicial Affairs. Go to http://www.calpoly.edu/~saffairs/csrja for information on the CPSU academic honesty policy.

**Classroom Courtesy:**

- Cell phones should be turned off or to silent mode before class begins. Please do not answer your phone during class.
- Refrain from eating during class as it can be a distraction/annoyance to those sitting around you.
- Be on time! I will start and dismiss class on time.
- Refrain from reading the newspaper, working the crossword puzzle or studying material from other courses.