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|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Class Meets: Tuesday & Thursday from 9:00 to 10:20 AM in 155 Coates Hall | | |
| Professor: JAMES P. GEAGHAN | | |
| Office | 149 Woodin Hall (aka Agriculture Administration Building) | |
| Office hours | Thursday after class (10:40 - 11:30), or call for appointment anytime | |
| Telephone | (225) 578 - 8303 | |
| Internet materials | Email address: jgeaghan@lsu.edu http://www.stat.lsu.edu (department home page) http://www.stat.lsu.edu/faculty/geaghan/jpghome.html | |
| Labs are held in Room 11, Ag Admin Bldg. | | |
| Lab Instructor | Fan Wang | |
| Office | Room 25 Woodin Hall (aka Agriculture Administration Building) | |
| Office hours | Scheduled by Lab Instructor | |
| Lab Times | Thursday (1) 10:30-12:20, (2H) 1:30-3:20 and (3) 3:30-5:20, (4) Friday 11:00-12:50 | |
| Grading Points: | 3 exams @ 100 points each | 300 |
| | 1 final @ 150 points | 150 |
| | Quizzes: 2 Lab practicum @ 25 points each | 50 |
| | Quizzes: Daily quizzes on random dates @ 50 points total | 50 |
| | Weekly lab assignments scaled to 100 percentage points | 100 |
| | TOTAL | 650 |
| Exam Schedule: See course webpage for confirmation of all dates | | |
| First Exam | Thursday, September 25, 2014 – Exam 1 | |
| Second Exam | Thursday, October 23, 2012 – Exam 2 | |
| Third Exam | Thursday, November 20, 2012 – Exam 3 | |
| Final Exam | Saturday, December 13, 2014 12:30 PM - 1:30 PM (keep this date open) | |
| Course Grading: | Score= $\frac{(\text{Exam1}+\text{Exam2}+\text{Exam3}+\text{Lab}\%+0.5*\text{Quiz}\%+0.5*\text{Practicum}\%+\text{Final})}{6.50}$ | |
| Letter grade | Guaranteed minimum letter grade assignment | |
| | 90 - 100 points, minimum grade of | A |
| | 80 - 89.9 points | B |
| | 70 - 79.9 points | C |
| | 60 - 69.9 points | D |

Course objective: The objective of the course is to help you to learn the statistical techniques that researchers use to organize, analyze and interpret the results of their investigations. You will learn to conduct analyses in a software package called SAS and will demonstrate your ability to use SAS with weekly homework assignments and lab practicums.

TEXT: (recommended, not required): Freund, Rudolph J., William J. Wilson and Donna L. Mohr. 2010. Statistical Methods, Academic Press (ELSEVIER), N.Y. Older editions are very similar: Freund, Rudolph J. and William J. Wilson. 2003. Statistical Methods, Academic Press, N.Y. (revised edition (1997) acceptable, 1993 edition inadvisable)

Course outline

| Reference Text: Freund and Wilson | | Page numbers | | |
|-----------------------------------------------|----------------------------------|--------------|---------|-----------|
| Topic | | 1997 | 2003 | 2010 |
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| | Course Objectives | | - | |
| | Definitions | | - | |
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| III Coefficient of Variation & Other measures | | 28 | 28 | 29 |
| IV Exploratory Analysis Plots | | 32 | 32 | 32 |
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| | Continuous Distributions | 81 | 81 | 86 |
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| | Distribution of Sample Means | 91 | 91 | 98 |
| | The Chi Square Distribution | 101 | 102 | 109, 641 |
| | The t distribution | 104 | 105 | 111 |
| | The F distribution | 106 | 106 | 113 |
| VI Tests of Hypothesis | | 117 | 117 | 125 |
| | Testing Hypotheses of Means | 159 | 161 | 127 |
| | Testing Hypotheses of Variance | 169 | 169 | 181 |
| | Equality of 2 Population Means | 185 | 185 | 201 |
| VII Analysis of Variance (ANOVA) | | 219 | 219 | 245 |
| VIII Post-ANOVA Techniques | | 242 | 242 | 269 |
| IX ANOVA (unequal sample size) | | 270 | 270 | 300 |
| | Factorial Treatment Arrangements | 417 | 417 | 473 |
| | Randomized Block Design | 464 | 464 | 524 |
| X Regression and Correlation | | 287 | 287 | 321 |
| XI Multiple-Regression | | 333 | 333 | 375 |

Catalog Course Description: *EXST7005 Basic concepts of statistical models and use of samples; measures of variation and central tendency; normal, t, chi-square, and F distributions; tests of hypothesis, analysis of variance, regression, and correlation; emphasis on field oriented life science research problems.*

EXST7005: Course notes contents

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The fine print:

Class attendance is expected. If you miss a class you are responsible for all of the material covered and any announcements made in class.

Make-up exams will not be given except under documented circumstances. There will be no make-up for quizzes.

Cell phones must be turned off or put on vibrate during class. **Cell phones must be turned off and concealed during exams.**

Cheating and Plagiarism: see the "Code of Student Conduct" under "Academic Misconduct" linked to the web page of the LSU Office of the Dean of Students page.