

SYLLABUS: EXST3201 - Statistical Techniques II – Fall 2005

Class Meets: Monday and Wednesday from 9:30 to 11:00 in room 248 Ag Admin Bldg for class and Friday from 9:30 to 11:30 in room 50 Ag Admin for lab.

Professor: JAMES P. GEAGHAN

Office **67 Agriculture Administration Building**
Office hours **During lab or call for appointment anytime**
Telephone **578 - 8303**
Internet materials **<http://www.stat.lsu.edu/faculty/geaghan/jpghome.html>**

Labs are taught in Room 50, Ag Admin Bldg.

Lab Instructor **James Geaghan**
Office **67 Agriculture Administration Building**
Lab Times **(1) Friday at 9:30 PM**

Grading Points:	3 exams count 100 points each	300
	1 final counts 100 points	100
	Weekly lab assignments count 100 points	100
	TOTAL	500

Exam Schedule:

First Exam **Wednesday, September 28, 2005**
Second Exam **Wednesday, October 26, 2005**
Third Exam **Wednesday, November 23, 2005**
Final Exam **Monday, December 12, 2005**

Course Grading: (Exam1% + Exam2% + Exam3% + Lab% + 2*Final%) / 600 = SCORE

Letter grade assignment	Guaranteed minimum grade
90 - 100 points, minimum grade of	A
80 - 89.9 points	B
70 - 79.9 points	C
60 - 69.9 points	D

TEXT: The Statistical Sleuth: A Course in Methods of Data Analysis. Fred Ramsey and Daniel Schafer. Duxbury Press; 2 edition (October 5, 2001). # ISBN: 0534386709

EXST 3201 Statistical Analysis II (4) S Prereq.: EXST 2201 or equivalent. 3 hrs. lecture; 2 hrs. lab. An applied statistical modeling course focusing on (a subset of): multiple regression, variable selection, serial correlation, repeated measures, multivariate tools, logistic regression, blocking and factorial designs, categorical data analysis and nonparametric techniques.

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Course outline

- 1) Review of background material, particularly hypothesis testing
- 2) Chapter 5. Comparisons Among Several Samples
 - Comparing any two means
 - Analysis of Variance
 - Extra Sums of squares
 - Related topics
- 3) Chapter 6. Linear Combinations and Multiple Comparisons of Means
 - Linear Combinations
 - Multiple Comparisons
 - Related topics
- 4) Chapter 7. Simple Linear Regression: A Model for the Mean
 - Fitting Simple Linear Regression
 - Testing Hypotheses
 - Simple Linear Regression
 - Related topics
- 5) Chapter 8. A Closer Look at Assumptions for Simple Linear Regression
 - Scatterplots
 - Assessment of fit
 - Related topics
- 6) Chapter 9. Multiple Regression
 - Fitting the model
 - Special variables
 - Related topics
- 7) Chapter 10. Inferential Tools for Multiple Regression
 - Inferences for regression coefficients
 - Testing extra sums of squares
 - Related topics
- 8) Chapter 11. Model Checking And Refinement
 - Residual plots
 - Influence diagnostics
 - Refining the model
 - Related topics
- 9) Chapter 12. Strategies for Variable Selection
 - Variable selection techniques
 - Evaluation criteria
 - Related topics
- 10) Chapter 13. The Analysis of Variance for Two-Way Classifications
 - Analysis of two-way models
 - Assessing the assumptions
 - Checking the additive model
 - Blocking
 - Related topics
- 11) Chapter 14. Multifactor Studies without Replication
 - Analysis with one observation per cell
 - Related topics
- 12) Additional Analysis of Variance topics (time permitting)