STAT 314 (Section 001) Applications of Statistics

Instructor: Dr. Scott Street	Office: Oliver PH 2057	Phone: 828-1301 ext. 138	FAX : (804) 828-8785	
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<u>Office Hours</u> : Monday Thursda	y 11:00	PM – 3:15 PM AM – 11:30 AM y appointment		
Texts: Statistics: The Exploration and Analysis of Data, Fourth Edition by Devore & Peck, Duxbury Press, 2001. Doing Data Analysis with SPSS 10.0, by Carver & Nash, Duxbury Press, 2000.				
Course Description: A study of the concepts and application of statistical methods including: estimation and hypothesis testing for two sample problems; one factor analysis of variance and multiple comparisons; randomized block designs and analysis; inferences on categorical data, including chi-square test for independence for contingency tables; simple linear regression and correlation; multiple linear regression. Special topics include distribution free (nonparametric) methods in various statistical problems, two factor analysis of variance, and the use of a statistical software package for data analysis. Prerequisite: STAT 210 or STAT 212. This section meets on Tuesdays and Thursdays in Temple 3303 from 2:00 PM – 3:50 PM for 29 days during Fall 2003.				
Topics Confidence Intervals and Hypoth sample and for comparing two po		<u>Textbook Chapters</u> Chapters 9 – 11	<u>Time</u> 10 days	
Categorical Data Analysis, One- Two-Way Analysis of Varianc		Chapters 12 & 15	10 days	

Randomized Block Designs

Simple Linear Regression, Multiple Linear Regression, Variable Selection, Regression Inferences

Exams: There will be three exams this term. The exams will be in class and are subject to the rules of the VCU Honor System. If you <u>must</u> miss an exam, you should contact me (I have voice mail) in advance; DO NOT EXPECT MAKE-UP EXAMS!!

Chapters 5,13 & 14

The tentative test dates are:

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EXAM 1	(Chapters 9 – 11)
EXAM 2	(Chapters 12 & 15)
EXAM 3	(Chapters 5, 13 & 14)

September 25 November 6 December 4 *or* Tuesday, December 9 @ 1:00 PM

7 days

Homework: Homework will be assigned in class and will be due periodically throughout the term. You may work together on the homework, but what you turn in should represent your own understanding of the problems. These assignments must be completed so that <u>only one side</u> of each piece of paper is used (page-backs will <u>not</u> be graded), and all of those pages must be <u>stapled</u> together; points will be deducted if this procedure is not followed. If you have difficulty with any of the homework, I will be more than happy to work with you. NO LATE HOMEWORK will be accepted except in **extreme** circumstances and only with **advance notice**. Selected homework problems will be graded on a three point scale: three points (if done correctly), two points (if there are minor errors), one point (if reasonably attempted), and no points (if not attempted). Solutions to all assigned homework problems will be made available.

<u>Grading</u> :	HOMEWORK (Total combined score)		100 pts.
	PROJECTS (Total combined score)		100 pts.
	EXAM 1		100 pts.
	EXAM 2		100 pts.
	EXAM 3		<u>100 pts.</u>
		TOTAL	500 pts.

A (450 – 500 pts.); B (400 – 449 pts.); C (350 – 399 pts.); D (300 – 349 pts.); F(0 – 299 pts.) THERE WILL BE NO EXTRA CREDIT ASSIGNMENTS

<u>Calculator/Software</u>: A calculator *that you know how to use* is required for this class. I recommend the TI-83 (or TI-83+) graphing calculator because it has built-in statistical capabilities. Sharing of calculators <u>will not</u> be permitted. Most assignments will incorporate SPSS software; this software is available for \$15 from the *online@vcu* store.

<u>Attendance</u>: You are expected to attend class regularly and to arrive on time. Classes will not be held on Thursday, November 27 (Thanksgiving Day).

Withdrawal Date: The last day to withdraw from the course is Friday, October 31, 2003 by 4:00 PM.

Important: If you must miss a class for some reason, be sure to call me or a fellow student for the lecture notes; furthermore, if you **must** miss a class in which an assignment is due or a test is to be given, it is in your best interests to notify me ahead of time (even if you must call just before class begins)! Remember...do not expect me to accept late assignments or to give make-up tests.

Policies:

- 1. All assignments must be single-sided and stapled unless directed otherwise. Also, for SPSS problems, only the relevant output should be included, and it should be well-labeled and identified.
- 2. Cell phones and beepers/pagers must be turned off in class. Violators may be dismissed from the classroom in accordance with the University's policies governing student conduct in the classroom, and these policies will be enforced in their entirety at all times in this class. Further details may be found in the *Undergraduate Bulletin* and at http://www.students.vcu.edu/rg/policies/rg7conduct.html.
- 3. The VCU Honor System applies at all times in this class. For specific details on the VCU Honor System, please visit http://www.students.vcu.edu/rg/policies/honor.html.
- 4. University Rules and Procedures prohibit anyone "to have in his possession any firearm, other weapon, or explosive, regardless of whether a license to possess the same has been issued, without the written authorization of the President of the University..."
- 5. Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require Virginia Commonwealth University to provide an 'academic adjustment' and/or a 'reasonable accommodation' to any individual who advises us of a physical or mental disability. If you have a physical or mental limitation that requires an academic adjustment or an accommodation, please arrange a meeting with me at your earliest convenience. Additionally, if any of your course work requires you to work in a lab environment, you should advise the instructor or department chairperson of any concerns you may have regarding safety issues related to your limitation(s).
- 6. All students are expected to comply with the Student Computer Initiative: http://www.vcu.edu/sci/.

<u>Helpful_Hints</u>:

- 1. If you have an emergency, it is your responsibility to notify the instructor as soon as possible.
- 2. Get the name and phone number of two or three of the students in this class to call if you miss class, to ask questions when you need help, or to form study groups.
- 3. If you have questions, please feel free to ask either during class or during my office hours. <u>Class participation</u> <u>is strongly encouraged</u>.
- 4. The concepts of this course build upon one another as the course progresses. To succeed, you must master each concept when it is presented. For this reason, you must put forth an adequate amount of time and effort on the problems and reading material on a regular basis.