PSY 315 *8*
BEHAVIORAL SCIENCE STATISTICS
SPRING EVENING 2002 SESSION

Instructor:	Marie J Burghardt, MSCP	Time:	Saturdays 8:00 – 12:30
		Place:	Camp Smith
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Chaminade University is a Catholic, Marianist University. The five characteristics of a Marianist education are:

1. *A balance of reason and faith*
2. *Education of the whole person*
3. *Family spirit/community*
4. *Service, justice, and peace*
5. *Adaptation to change*

Each of these characteristics is integrated, to varying degrees, in this course.

Course Overview: The focus of this course is on understanding basic statistical topics in social science research methodology. Topics which will be covered include: frequency distributions, graphical representations, measures of central tendency, variability, normal curve, derived scores, correlation, regression, statistical inference, and various hypothesis tests including t-tests and chi-square tests.

Course Objectives:

1. Student will be able to demonstrate an understudying of descriptive statistics and inferential statistics and their role in the scientific method.
2. Student will be able to demonstrate an understudying of statistical tables.
3. Student will be able to demonstrate an understudying of central tendency.
4. Student will be able to demonstrate an understudying of how to utilize statistical formula.
5. Student will be able to demonstrate an understudying of standard scores.
6. Student will be able to demonstrate an understudying of correlation.
7. Student will be able to demonstrate an understudying of *t*-test.
8. Student will be able to demonstrate an understudying of regression.
9. Student will be able to demonstrate an understudying of ANOVA.
10. Student will be able to demonstrate an understudying of hypothesis testing in a research context.

Textbooks: **The** *required* **text is:**

Frederick J Gravetter, Larry B. Wallnau (2002).
***Essentials of Statistics for the Behavioral Sciences** 4th Ed.* **CA: Brooks/Cole.**

Exams:

- There will be one midterm exam and one final exam. Each exam will consist of problem solving.
- The exams will be similar in format to the exercise sets found at the end of each chapter in your textbook.
- The exams will basically cover each of the learning objectives as stated in the syllabus. EXAMS ARE OPEN BOOK. You will be able to use your calculator, class notes, and your textbook.
- You will not do well on exams unless you complete homework assignments and actively participate in class exercises.

Calculator:

- To do most of the exercise sets and exams you will need a calculator (a small hand calculator, we're not talking mainframe here.)
- Keep in mind that this course does not require sophisticated mathematics! Just make sure that your calculator has a memory for storing numbers, a "square" key (to square number) and a square root key.
- If you choose to use a sophisticated calculator, make sure you know how to use it.

Course Requirements:

Grading: Your grade will be determined by your performance on your exams.

The total possible points for each exam is:	Thus, the total number of points possible is 500. Grades will be assigned as follows:	
Midterm Exam = 200 points Final Exam = 300 points	Point Range	Grade
	450 – 500	A
	399 – 449	B
	348 – 398	C
	297 – 347	D
	Below 297	F

Study Groups I encourage you, if it is at all possible, to form your own study group. Sharing questions and hearing others describe concepts will often times facilitate studying. (Besides there is the old adage about "misery loves company".)

Make-up exams: If you for some <u>significant</u> reason are unable to take either of the exams, you are to contact me as early as possible to arrange to take the exam.

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TENATIVE SYLLABUS

Week	Topic	Reading Assignment
1 10 -11	Introduction, Preliminary concepts, Frequency distribution Central Tendency Quiz 1	Chapters 1, 2, & 3
2 10-18	Variability Quiz 2	Chapters 4 & 5
3 10-25	z-Scores: Location of scores & standard distributions Probability Quiz 3	Chapters 6 & 7
4 11-1	Probability & Samples: Distribution of sample means Introduction to hypothesis testing Introduction to the t statistic Quiz 4	Chapters 8 & 9
11-8	**NO CLASS**	
5 11-15	MIDTERM Quiz 5	
6 11-22	The t test for two independent samples The t test for related samples Estimation Quiz 6	Chapters 10, 11, & 12
7 11-29	Introduction to ANOVA Two-factor analysis of variance (independent measures) Quiz 7	Chapters 13 & 14
8 12-6	Correlation & regression Quiz 8	Chapter 15
9 12-13	Chi-square Quiz 9	Chapter 16
10 12-20	FINAL	