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PSYC 520.01: Advanced Psychological Statistics I

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PSY 520

Advanced Psychological Statistics I

Course Syllabus – Fall, 2001

Professor: John C. Caruso, Ph.D.

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Office Hours: Mondays and Wednesdays, 9:30-11:30, and by appointment.

Course Description: Brief review of statistical inference, discrete and continuous probability distributions, linear combinations, expectation, univariate correlation, regression, and ANOVA.

Course Objectives: After completing this course, you should be able to:

- (1) Demonstrate an understanding of basic concepts and methods of descriptive and inferential statistics.
- (2) Determine which statistical techniques are appropriate to address various research questions.
- (3) Use various computer programs (particularly SPSS) to perform basic statistical analyses.

Grades: Grades will be based on three components:

- (1) ten 10-point quizzes (at the beginning of class each Monday) which will assess your knowledge of lecture material and assigned readings.
- (2) ten 5-point homework assignments which will involve either data analysis or essay questions.
- (3) one 50-point final exam covering all areas of the course. There are a total of 200 points and the following scale will be used.

180-200 (90-100%)	A
160-179 (80-89%)	B
140-159 (70-79%)	C
120-139 (60-69%)	D
000-119 (0-59%)	F

Required Textbooks:

Howell, D. C. (2002). Statistical methods for psychology (5th Edition). New York: Duxbury Press.

Recommended Textbooks:

George, D., & Mallery, P. (2000). SPSS for Windows step by step: A simple guide and reference (2nd Edition). Boston: Allyn and Bacon.

Class Schedule:

<u>Week of</u>	<u>Topic</u>	<u>Chapter</u>
9/3 (no class Monday)	Introduction / Describing Data	Preface, 1, 2
9/10	Normal Distributions / Sampling Distributions	3, 4
9/17	Probability / Categorical Data	5, 6
9/24	Hypothesis Testing for Means	7
10/1	Power	8
10/8	Correlation and Regression	9
10/15	Alternative Correlational Techniques	10
10/22	ANOVA	11
10/29	Multiple Comparisons	12
11/5	Factorial ANOVA	13
11/12 (no class Monday)	Repeated-measures ANOVA	14
11/19	Multiple Regression	15
11/26	General Linear Models	16
12/3	Log-linear Models	17
12/10	Non-parametric Tests	18
12/17	FINAL EXAM (8-10 AM)	

Notes: 1. October 19, 2001 is the last day to drop classes. After that date, no petitions to drop the course will be signed and no Incompletes will be given except in documentable emergency situations.

2. The University of Montana provides certain services for students with disabilities. Students with disabilities have the responsibility to declare their disability to me at the beginning of the course if they require accommodations. Such students have the responsibility to arrange for such accommodations with Disability Services for Students