

## PSY-6110: Quantitative Methods in Psychology - II

University of Toledo, Department of Psychology

Spring 2016; TR 11:00-12:15, UH 5150F

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Office Hours:	R 12:30-1:30; or by appt.	MW 12:30-2:00; or by appt.

**Course Goals:** This course builds on PSY 6100, Quantitative Methods in Psychology-I, and is designed to solidify knowledge of exploratory data analysis, *t*-tests, effect sizes, power, and ANOVA as well as provide an understanding of correlation, regression, and multiple regression. In addition, practical skills in computerized statistical analysis using SPSS will be emphasized, including using syntax for data management, data transformation, data analysis, and data modeling.

The University of Toledo abides by the Americans with Disabilities Act (equal and timely access) and Section 504 of the Rehabilitation Act of 1973 (non-discrimination on the basis of disability). If you have a disability and are in need of academic accommodations but have not yet registered with the Office of Accessibility (OA) (Rocket Hall 1820; 419-530-4981; [officeofaccessibility@utoledo.edu](mailto:officeofaccessibility@utoledo.edu)) please contact the office as soon as possible for more information and/or to initiate the process for accessing academic accommodations. I also encourage students with disabilities receiving accommodations through OA to discuss these with me, after class or during my office hours, so that I may be better informed on how to assist you during the semester.

**Prerequisites:** PSY 6100/7100 or an equivalent course

### Texts:

Field, A. (2013). *Discovering statistics using SPSS* (4<sup>th</sup> Ed.). Thousand Oaks, CA: Sage. (ISBN-10: 1412977525); <http://www.statisticshell.com/> <http://www.sagepub.com/field4e/main.htm>

Howell, D. C. (2010, 2013). *Statistical Methods for Psychology* (8<sup>th</sup> Ed.). Belmont, CA: Wadsworth, Cengage Learning (ISBN-10: 1111835489); <http://www.uvm.edu/~dhowell/methods8/index.html>

**Other Helpful Supplies:** Calculator, SPSS Graduate Pack (12 month renewable license; \$90.25 for standard [Base, Advanced, Regression], \$101.00 for Premium [everything but Amos])

### Course Requirements:

1. Attend and participate in class.
2. Read the texts and other material when they are assigned.
3. Complete all homework assignments and have them ready to turn in at the start of class.
4. Successfully complete the exams.
5. Use the computers during class just for stats; no email, shopping, Facebook, etc.

**Grading:** Relatively equal emphasis is placed on conceptual knowledge, as demonstrated on exams, and practical knowledge, as demonstrated on homework assignments.

Lowest values for grades: A = 93% (205), A- = 90% (198), B+ = 87% (191), B = 83% (183), B- = 80% (176), C = 70% (154), D = 60% (132).

I will assign grades based on how well you master the material but if the whole class does poorly on an exam or assignment, I will make adjustments. Late assignments lose 10% per day.

Assignments	Approx weight	Total possible points
2 exams- 50 pts each	45%	100
Homework assignments (10 out of 11 at 10 pts each)	45%	100
Class attendance and participation	10%	20
<b>Total</b>		<b>220</b>

**Collaboration:** It is often very helpful to discuss class or homework topics with classmates. However, you must prepare all the material submitted for a grade on your own. It is not permissible to submit any material prepared by another student. You also may not collaborate during an exam.

**Schedule:** A tentative schedule is below, though it may be adjusted depending on our pace. I anticipate 1 homework assignments, with one due almost every week. The schedule for the exams will be fixed.

Wk	Date	Topic	Reading	HW Due
1	1/12 1/14	Introduction, Orientation, Review: descriptives, SPSS	Howell, Ch 1 (R=review) Field: Ch 1 (R) & 2	
2	1/19 1/21	SPSS environment -- Data Transformations, Data Functions, Data Management, Data Restructure	H: Ch 2 (R) & 3 (R) F: Ch 3 (R) & 4 (R)	HW #1
3	1/26 1/28	Review- z scores, assumptions Review - Sampling Error, Confidence Intervals, ANOVA	F: Ch 2 & 9 (R)	HW #2
4	2/02 2/04	Correlation Regression	F: Ch 7 F: 8 1-8 2	HW #3
5	2/09 2/11	Regression	F: 8 3-8.4	HW #4
6	2/16 2/18	Multiple regression	F:8-5-8.10	HW #5
7	2/23 2/25	Understanding interactions Moderation and mediation	F: 10	
8	3/01 3/03	Review/Finish regression Exam 1		HW #6
9	3/08 3/10	<b>No Class - Spring Break</b>		
10	3/15 3/17	Review- Oneway ANOVA and the GLM	H: 11 (R) F: 11 (R)	
11	3/22 3/24	Factorial ANOVA Understanding interactions	F: Ch 13	HW #7
12	3/29 3/31	Repeated measures ANOVA	F: Ch 14	HW #8
13	4/05 4/07	Mixed ANOVA	F: Ch 15	HW #9
14	4/12 4/14	ANCOVA MANOVA	F: Ch 12 F: 16	HW #10
15	4/19 4/21	Categorical analysis and logistic regression	F: Ch 18 (R) & 19	
16	4/26 4/28	Intro to multi-level modeling Exam 2	F: Ch 20	HW #11