University of Toledo - Department of Psychology - Fall 2017
PSY 6100/7100-Quantitative Methods in Psychology I
Tuesdays & Thursdays 9:35-10:55am
University Hall Room 5150G

Instructor: Dr. Kamala London Newton Office: UH 1880B (1st floor) Telephone: (419) 530-2352 E-mail: kamala.london@utoledo.edu Office hours: T 11-noon R 11:15am-12:15pm or by appointment	**Teaching Assistant**: Christina Perez Office: UH 1900B (also 1st floor) E-mail: christina.perez @rockets.utoledo.edu Office hours: Monday 10am-12pm

Required Texts

- Field, A. (2009) *Discovering statistics using SPSS* (3rd ed.). London: Sage. There are older versions of this around, but the new version does a lot more. Visit his website for much supplemental materials.
- Additional required readings will be assigned in class.
- You'll need a basic calculator.

Prerequisites

Officially, there is no prerequisite for this course; however, you should have a mastery of computational concepts (including basic algebra) and at least one elementary statistics course at the undergraduate level. If you are unsure whether you have the appropriate background make sure to talk with me about appropriate placement during the first week of classes.

Course Description

This course provides a basic understanding of the statistics used most commonly by social scientists. Topics to be covered include summarizing data with graphs and numbers, generalizing from samples to a population, and determining the effect of one variable on another. We will emphasize the interpretation and application of statistics. Even students who say they have "math anxiety" can excel in this class, if they are willing to keep up with the work. This course is the first of a three course series that fulfills the research and statistics requirements. By the end of this class, you will be able to:

1. summarize and organize data,
2. select and calculate an appropriate statistic to decide whether a variable reliably affects another variable, or whether such findings are driven by chance,
3. critically evaluate research findings in scientific journals and in the media,
4. run analyses and interpret output from a statistical software program (SPSS), and
5. possess a basic understanding of statistics that can be built upon in future research design and statistics classes, as well as the foundations needed to conduct and analyze your own studies.

Course Requirements & Evaluation

Attendance. Required, but email if you have to miss due to illness, religious reasons, conference, etc. Please do not use computers for reasons other than class work. Arrive on time and do not leave early.

Cheating. Don't. If you are planning on cheating see me beforehand to discuss the penalties.

Class participation. You will be expected to read the assigned chapters and/or readings before each class period. Each class session will entail some lecture and some discussion. You will be expected to show thoughtful and critical understanding of the assigned readings in your class participation. Reading the material beforehand is essential; it will make the material in lectures easier to understand and will ensure the pace of the class can move along. I highly encourage questions, especially if aspects of the reading were confusing. Your class participation will be your opportunity not only to ask questions, but to demonstrate your understanding of the assigned reading.

Presentations and how-to handouts. You will sign up for two topics to present to the class. Presentation length will vary and will entail demonstrating to the class how to run some statistical procedure. Your presentation should be accompanied by a brief one page (in whatever format you think best facilitates learning) how-to page to hand out to the class. We should discuss your presentation before giving it, either after class or in office hours.

Homework assignments. The best way to grasp statistical concepts is to use them. After discussing each concept, I will give you a data set to play around with to get some practical experience with the concept. Your grasp of these concepts will be demonstrated on 10 homework assignments; your top 8 grades on these assignments will count toward your course grade.

Examinations. Your knowledge of the bigger picture, how the various course concepts work together, will be tested on three in-class examinations. The format of the exams (largely essay) will be discussed in greater detail in class.

Grading Policy. Each assignment will contribute toward your final grade as follows:

Assignment	**Approx. Weight**	**Total Possible Points**
3 exams- 45 pts each	45%	135
Homework assignments (8 of 10 at 11 pts each)	30%	88
class presentations and handouts	15%	46
class attendance & participation	10%	31
Total		300

Course grades are determined using the following system:

93-100 A	87-89 B+	77-79 C+	67-69 D+	0-59 F
90-92 A-	83-86 B	73-76 C	63-66 D	
	80-82 B-	70-72 C-	60-62 D-	

Class Policies

- No cell phones or other electronic devices (except calculator). Please turn them off.
- Classroom citizenship (i.e., following classroom policies) during graduate courses is a big part of training and is a reflection of professional behavior. Please follow these policies. I reserve the right to ask students in violation of class policies to leave the class. Students with more than three total violations may be asked to drop the course or receive an "F".

Changes to Syllabus

The information in this syllabus is subject to change. The schedule will change according to our pace. Changes will be announced in class. You are responsible for all class announcements.

Tentative Schedule

Week	Date	Topic	Reading	Assignment
1	Aug 29	Introduction, syllabus, course overview; Basic concepts	preface	
	Aug 31	Basic concepts	F: 1.1-1.5	
2	Sept 5	SPSS/ Graphs	F: 3	
	Sept 7	Graphs	F: 4	**HW 1 due**
3	Sept 12	Average	F: 1.6-1.9	
	Sept 14	Variability		**HW 2 due**
4	Sept 19	Exploring assumptions	F: 5.1-5.3	
	Sept 21	Correcting problems with data	F: 5.4-5.9	**HW 3 due**
5	Sept 26	**Exam 1**		
	Sept 28	Normal Distribution, Z scores, & probability	H: 4	
6	Oct 3	Sampling distributions		**HW 4 due**
	Oct 5	Hypothesis testing	F: 2	
7	Oct 10	t tests	F: 9.1-9.4	
	Oct 12	t tests	F: 9.5-9.13	**HW 5 due**
8	Oct 17	**No class-Fall Break**		
	Oct 19	Catch up day/ review		
9	Oct 24	**Exam 2**		
	Oct 26	Power	H: 8	
10	Oct 31	ANOVA 1	F: 11.1-11.3	
	Nov 2	ANOVA 2: Planned comparisons & post hoc tests	F: 11.4-11.14	**HW 6 due**
11	Nov 7	2 way ANOVA & interactions	F: 13	
	Nov 9	Repeated measures ANOVA	F: 14	**HW 7 due**
12	Nov 14	Correlation	F: 7.1-7.2	
	Nov 16	Correlation	F 7.3-7.13	
13	Nov 21	Non-parametric approaches	F: 6	**HW 8 due**
	Nov 23	**No class- Happy Thanksgiving!**		
14	Nov 28	Robust methods	TBA	**HW 9 due**
	Nov 30	Categorical data- Chi square	F 18.1-18.5	
15	Dec 5	Chi-square/ review		**HW 10 due**
	Dec 7	**Exam 3**		