

**INTERMEDIATE STATISTICS FOR BEHAVIORAL SCIENCE****Yale Gordon College of Arts and Sciences**

3 credit hours

APPL 631

Fall 2019

**Class Information:**

Tuesdays

Section 085: 2:00 PM - 4:30 PM, AC RM 221

Section 185: 5:30 PM - 8:00 PM, BC RM 207

08/26/2019 - 12/15/2019

**Instructor:**

Dr. Archana M. Tedone

**Contact Information:**

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I prefer that students contact me via email. Please be sure to include the course number in the subject line. I will make every effort to respond to your inquiry within 48 hours or earlier. If an issue is urgent, please indicate "urgent" within the subject line of the email and I will respond as soon as possible.

**Office Hours and Location:**

Office: LC 410, office hours by appointment

**Course Description:**

The logic of hypothesis testing and assumptions underlying its use are the framework for studying analysis of variance and covariance and multiple regression. These tools are learned in the context of application to psychological research. Students learn to complete statistical analyses using a microcomputer statistical package and to interpret the results. Prerequisite: This course is open only to the following majors: Applied Psychology or Certificate in Professional Counseling Studies. Other majors may take this course with departmental permission only.

**Student Learning Outcomes:**

Upon successful completion of this course, students will be able to:

- Understand the various statistical techniques utilized in psychological research
- Select appropriate statistical techniques (e.g., t-test vs ANOVA)
- Perform statistical analyses and interpret output using SPSS statistical software
- Apply statistical assessments to assess complex research scenarios
- Interpret statistical information by writing APA style results

**Required Course Materials:**

Privitera, G. J. (2018). *Essential statistics for the behavioral sciences* (2nd edition). SAGE Publications. ISBN: 9781506386300

**Course Requirements/Assignments:**

**PREPARATION FOR CLASS:**

- You are expected to read the assigned chapter(s) before each week’s class meeting. Practice problems are expected to be completed after the lecture, to help solidify the material covered. Answers to the practice problems can be found in the textbook, however, please bring any questions you have to class.

**QUIZZES & EXAMS:**

- There will be one quiz worth 50 points, two exams worth 100 points each, and one final exam worth 150 points. The final exam is cumulative, however, 50% of the exam will be focused on the last two chapters covered. Exam questions will be based on materials taken from the textbook, lecture, and classroom activities/discussions/assignments. Questions will be designed to assess your mastery of the content covered and to test your ability to apply and use the concepts and principles discussed.
- *Unexcused absences from exams will result in a grade of zero for the missed quiz or exam.* In case of an emergency or extenuating circumstance, you may be allowed to reschedule an exam. However, you must make arrangements with the instructor prior to the test period. You will be required to provide the instructor with written verification from an appropriate individual (e.g., original written medical excuse from a physician). Make up exams may be different in format and content from the scheduled in-class examinations. There will be no exceptions to this policy.

**HOMEWORK:**

- There will be four homework assignments given throughout the semester. Homework assignments will be announced during class and will be submitted during the start of the following class. You must be present in class to submit the homework assignments. Each homework assignment is worth 25 points.

**Attendance Policy:**

Attendance is important and necessary to pass the class. Attendance will be taken during each class, and failure to consistently attend class will impact your participation grade. Class activities, exams, quizzes, and homework assignments cannot be made up if not present during class, unless there is an emergency or extenuating circumstance. You will be held responsible for all material covered during class. Material not contained in your textbook may be covered during class meetings and included in exams.

**Grading Evaluation Procedure:**

Quiz	40 pts
2 Exams (75 pts each)	150 pts
8 Homework Assignments (20 pts each)	160 pts
Participation	50 pts
Final Exam	100 pts
<b>Total</b>	<b>500 pts</b>

Your final grade will be determined as follows:

<u>Total Points Earned</u>	<u>Percent</u>	<u>Letter Grade</u>
465 and higher	93-100	A
450-464	90-92	A-
435-449	87-89	B+
415-434	83-86	B
400-414	80-82	B-
385-399	77-79	C+
365-384	73-76	C
350-364	70-72	C-
335-349	67-69	D+
315-334	63-66	D
300-314	60-62	D-
299 and lower	0-59	F

*These cut-points will be firmly adhered to for determining final grades.*

**Tentative Course Schedule:**

Wk	Date	Topic(s)	Reading(s)	Practice Problems	Additional Assignments	
1	8/27	Intro to Statistics & Freq. Dist. In Tables and Graphs	Ch. 1: 1.1-1.5 Ch. 2: 2.1-2.5, p. 48, 2.9-2.11	Ch. 1: 2-10 even, 20-26 even, 28-32 even Ch. 2: 1-6 even, 12-20 even, 32	Appendix A review	
2	9/3	Central Tendency & Variability	Ch. 3 & Ch. 4	Ch. 3; 4, 8-10 even, 12-32 even Ch. 4: 2-10 even, 14-28 even, 32	HW 1 Due	
3	9/10	Probability, Normal Dists., and z Scores	Ch. 5	2-8 even, 12-30 even, 32	<b>Quiz 1</b> (Chs. 1-4)	
4	9/17	Sampling Dists.	Ch. 6	2-8 even, 12-32 even	HW 2 Due	
5	9/24	Hypothesis Testing	Ch. 7	Ch. 7: 2-12 even, 14-32 even	HW 3 Due	
6	10/1	<b>EXAM 1</b> (Chs. 5-7)				
7	10/8	One-Sample <i>t</i> Test	8.1-8.6	Ch. 8: 2, 4, 12, 14, 18, 22-28 even		
8	10/15	Independent- and Paired Samples <i>t</i> Tests	Ch. 9 & Ch. 10 (10.1, 10.2, 10.4)	Ch 9: 2-12 even, 14-32 even Ch 10: 2-8 even, 16, 22, 24, 28-32 even	HW 4 Due	
9	10/22	One-Way ANOVA	Ch. 11	10, 14, 26		
10	10/29	Two-Way ANOVA	Ch. 12	2-12 even, 14-32 even	HW 5 Due	
11	11/5	<b>EXAM 2</b> (Chs. 8-12)				
12	11/12	Correlation	Ch. 13 (13.1-13.6)	2-8 even, 10a, 14		
13	11/19	Method of Least Squares and Linear Regression	Ch. 13 (13.7-13.11)	16-20 even, 24, 32	HW 6 Due	
14	11/26	Chi-Square Tests	Ch. 14	2-14 even, 18-32 even	HW 7 Due	
15	12/3	Final Exam Review				HW 8 Due
16	12/10	<b>FINAL EXAM</b> (Cumulative, but 50% on Chs. 13 & 14)				

### **Important Dates**

Aug. 26 <sup>th</sup>	Classes begin
Aug. 31 <sup>st</sup> - Sept. 2 <sup>nd</sup>	University closed for Labor Day holiday
Sept. 3 <sup>rd</sup>	Last day to withdraw from a course <b>without</b> a “W”
Oct. 13 <sup>th</sup>	Midterm grades due
Oct. 29 <sup>th</sup>	Last day to withdraw from a course <b>with</b> a “W”
Nov. 28 <sup>th</sup> - Dec. 1 <sup>st</sup>	University closed for Thanksgiving break
Dec. 8 <sup>th</sup>	Last day of classes
Dec. 9 <sup>th</sup> - Dec. 15 <sup>th</sup>	Final exams

### **Additional Resources**

- Student Success Resources: <http://www.ubalt.edu/policies/academic/Student-Success-Resources-Syllabus-Addendum.pdf>
- Andy Field’s SPSS website: <https://www.discoveringstatistics.com/>

*This syllabus is provided as a guideline and is subject to change. Necessary revisions will be announced in class with as much advanced notice as possible.*