

COMM 7790

Statistical Applications in Communication II:

Spring 2019

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Office Hours: Mondays: 2:00-3:00pm, Thursdays 1:30-3:30pm, and by appointment

Class Location: JRN 342

Time: TuTh: 3:55 – 5:15pm

COURSE MATERIALS

Required Texts:

- Hayes, A. F. (2005). *Statistical Methods for Communication Science*. New York: Routledge
- Berry, W. D., & Feldman, S. (1985). *Multiple Regression in Practice*. Sage Publications.

**Any additional required readings will be posted on CARMEN

Suggested Texts: note –texts are meant to supplement your learning, you will not be tested on any material unique to these texts

- Agresti, A., & Finlay, B. (1997). *Statistical Methods for the Social Sciences*. Upper Saddle River, NJ: Prentice Hall.
- Gravetter, F. J., & Wallnau, L. B. (2005). *Essentials of Statistics for the Behavioral Sciences*. Belmont, CA: Thomas Wadsworth [beginner/intermediate level]
- Keppel, G., & Wickens, T. D. (2004). *Design and Analysis: A researcher's handbook*. Upper Saddle River, NJ: Prentice Hall

Additional Materials:

- This course requires access to SPSS software (other software such as R is allowable, but contact instructor before using).
- Please bring a calculator and paper with you to every class!

ABOUT THIS COURSE

Course Description and Goal:

This course intends to provide a foundation for basic statistical techniques in communication research, with a focus on ANOVA and Regression analyses.

Objectives:

1. To improve quantitative reasoning skills and provide a foundation for further statistical learning (through exams)
2. To understand, and be able to implement, a variety of statistical techniques (homework)
3. To understand concepts related to ANOVA and Regression (exams)
4. To learn and practice running statistical analyses (homework)

ASSIGNMENTS & EVALUATION

Exams:

There will be two exams in this course, a midterm and a final. These exams intend to assess your conceptual knowledge of the material and will consist mostly of multiple-choice, true/false, and short answer items. Simple computations may be necessary in order to answer an item correctly. The final exam will not be cumulative, per say, however in order to perform well on this exam, foundational statistical knowledge will be required. These exams will be worth 62% (31 % each) of your final grade.

Problem Sets:

There will be 12 problem sets assigned throughout the semester. In general, these sets will be due at the beginning of class on TUESDAY of every week (unless otherwise specified). It is expected that students work on these problem sets **ALONE**. Each problem set will be graded on a 10-point scale. Where possible, these assignments should be typed, printed (**I will only accept hard copies**), and stapled. Generally, these problem sets will include a series of questions related to the material discussed in lecture and in the readings from the preceding week. In order to do well on these sets, the following guidelines must be met: 1) all work is neat, legible, and obvious (make sure the answer is clearly stated), 2) you show EACH STEP to any math problem involving hand computations (I suggest using Microsoft Equation and excel), 3) Provide and label all relevant documents for computer-generated answers (e.g., SPSS output & syntax with answers labeled on the printout), and 4) be turned in, in class, on the due date. Late problem sets **will not** be accepted (note course policy here). These sets will comprise 38% of your final grade.

GRADING SCALE

	Maximum Points	% of Grade
Midterm Exam	100	31
Final Exam	100	31
Problem Sets (12)	120	38
Total	320	100

Below is the scale that will be used to calculate final grades:

Grade	Percentage	Points
A	93% - 100%	297 – 320
A-	90% - 92.9%	288 – 296
B+	87% - 89.9%	278 – 287
B	83% - 86.9%	265 – 277
B-	80% - 82.9%	256 – 264
C+	77% - 79.9%	246 – 255
C	73% - 76.9%	233 – 245
C-	70% - 72.9%	224 – 232
D	60% - 69.9%	192 – 223
E	< 60%	< 191

POLICIES AND MISCELLANEOUS

Late or Absent Assignments and Missed Exams:

UNLESS OTHERWISE STATED, assignments are due at the beginning of class on the due date specified on the syllabus. Late assignments will not be accepted. The only exceptions to these rules are tragic, extraordinary, and totally unforeseen personal circumstances that are convincingly **documented** no later than 24 hours after the due date.

Attendance:

To do well in this course it is HIGHLY RECOMMENDED that you attend class. There is no formal attendance policy in this course, because you are graduate students, but suffice it to say it is a very bad idea to miss.

Carmen:

All class materials, and assignment grades, will be posted on Carmen. A list of these materials include supplemental readings, handouts, data sets, and problem sets. Please make a habit of checking Carmen daily so that you are adequately prepared for class and for completing the assignments.

Student Academic Services:

Arts and Sciences Advising and Academic Services' website provides support for student academic success. Information on advising issues such as tutoring, transfer credits, academic standing, and contact information for Arts and Sciences advisors can be obtained through this website. The site is: <http://advising.osu.edu/welcome.shtml>

Student Services:

The Student Service Center assists with financial aid matters, tuition and fee payments. Please see their site at: <http://ssc.osu.edu>

Copyright Disclaimer:

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Academic Dishonesty and Misconduct

Academic Dishonesty is a serious offense. All work that you submit for this course must be your own and unassisted by the work or ideas of present or past COMM7790 students or any persons other than the instructor. That means you are expected to work independently on all problem sets. To do otherwise is to cheat. If any form of academic dishonesty is detected, the instructor will follow the procedures and penalties outlined by Ohio State University.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>

Accessibility Accommodations for Students with Disabilities:

Requesting Accommodations

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know via email immediately so that we can privately discuss options. You are also welcome to register with Student Life Disability Services to establish reasonable accommodations. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu ; 614-292-3307; slds.osu.edu ; 098 Baker Hall, 113 W. 12th Avenue.

Religious Holidays:

Students who will be observing a religious holiday on a class date or exam date must provide date/event written notification to the instructor within the first two weeks of the semester so that alternative arrangements can be made.

SOC Diversity Statement:

The School of Communication at The Ohio State University embraces and maintains an environment that respects diverse traditions, heritages, experiences, and people. Our commitment to diversity moves beyond mere tolerance to recognizing, understanding, and welcoming the contributions of diverse groups and the value group members possess as individuals. In our School, the faculty, students, and staff are dedicated to building a tradition of diversity with principles of equal opportunity, personal respect, and the intellectual interests of those who comprise diverse cultures.

Title IX:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Please note that the instructor reserves the right to adjust the syllabus according to the needs of the class

TENTATIVE SCHEDULE (required readings are **bolded**, suggested readings are not)

Week	Date	Topic	Reading (#'s = chapter #)	Assignments Due Date
1	1/8 (T)	Intro to course, statistics, measurement	GW: 1	
	1/10 (Th)	Descriptive statistics	GW: 3,4	
2	1/15	Statistical Inference: Estimation	GW: 5,6	Problem Set 1
	1/17	Statistical Inference: Estimation	AF: Ch. 5	
3	1/22	Statistical Inference: Significance tests, Effect size, and power	GW: 7,8; KW:8	Problem Set 2
	1/24	T-test review		
4	1/29	Introduction to ANOVA	KW: 1; H: 14	Problem Set 3
	1/31	One-Way Anova model and assumptions	KW: 7	
5	2/5	One-Way Anova comparisons	KW: 4, 5	Problem Set 4
	2/7	Intro to Factorial Designs	KW: 10	
6	2/12	Two Factor Designs: Major effects	KW: 11	Problem Set 5
	2/14	Two Factor Designs: Simple effects and comparisons	KW: 12	
7	2/19	Two Factors Designs: Interaction contrasts	KW: 13	Problem Set 6
	2/21	Within Subjects Designs: Single Factor	KW: 17	
8	2/26	Within Subjects: Major, Simple Effects, Interaction	KW: 16	Problem Set 7
	2/28	Mixed-Design	KW: 19	
9	3/5	Review		
	3/7	Exam 1	H: 12	
10	3/12	NO CLASS SPRING BREAK		
	3/14	NO CLASS SPRING BREAK		
11	3/19	Correlation & Bivariate regression	AF: 9; BF: pp.9-12	
	3/21	Model Assumptions & Violations	H: 12	
12	3/26	Multivariate Relationships	H: 13	Problem set 8
	3/28	Multiple Regression	H: 13	
13	4/2	Specification Errors	BF: pp. 18-26	Problem set 9

	4/4	Residual Plots	BF: 26-50, 73-88	
14	4/9	Categorical Variables	McClendon p. 93 - 132	Problem set 10
	4/11	Categorical Variables		
15	4/16	Multiple and Partial Correlations	AF: Ch. 11	Problem set 11
	4/18	Stepwise Regression and Review	Baron& Kenny	
Final Exam: Monday 4/29 6:00pm-7:45pm				

I would like to acknowledge Dr. Hee Sun Park, Gwen Wittenbaum, Joyce Wang, and Andrew Hayes for their contributions to the production and creation of this course.