

**SOC W 602 –Statistical and Data Analysis in Social Work Research**

**Winter 2018**

Mondays, Wednesdays 11:00am-12:15pm in SWKT 102

**Instructor:** Nathan Jorgensen, MS  
**Office Location:** 2169 JFSB  
**Office Hours:** M, W 3:00-4:00pm or by appointment  
**Email:** nathan.a.jorgensen@gmail.com

**Teaching Assistant (TA lab is 2169 JFSB)**

Name	E-mail	Office Hours
Selina Miller	selinadforsyth@gmail.com	Tue 9-11am or by appointment

**Course Description**

This course will help you understand the logic of various statistical techniques based on the linear regression model. I emphasize the use of statistics on real data. Students will learn to do regression analysis using Stata and to interpret results for a variety of regression models including multiple regression, regressions using a variety of special functional forms, and model building strategies. We will also cover the assumptions of the regression model, the consequences of violating these assumptions, and potential solutions to such violations. By the end of this course you should be able to:

1. Use a variety of statistical techniques such as multiple regression (including special functional forms) and logistic regression.
2. Use Stata to obtain results on real data.
3. Make decisions about data to obtain answers to research questions using quantitative data analysis.
4. Better understand and improve critical examination of empirical research which appears in scholarly journals and books.
5. Contribute to empirical research by formulating a meaningful research question, conducting data analysis, and interpreting your findings.

*Core Competencies and Social Work Values Addressed in Soc W 602*

<b>Competency 4: Engage in Practice-informed Research and Research-informed Practice</b>	
Use practice experience and theory to inform scientific inquiry and research.	Research examples in class, final exam
Apply critical thinking to engage in analysis of quantitative and qualitative research methods and research findings.	Final exam
Use and translate research evidence to inform and improve practice, policy, and service delivery.	All mini-assignments
Use research evidence to inform and improve clinical assessment and intervention with clients.	Examples in class, final exam

Participate in the generation of new qualitative and quantitative clinical knowledge, through research and practice.	All mini-assignments, final exam
<b>Competency 9: Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities</b>	
Critically analyze, monitor, and evaluate intervention and program processes and outcomes	All mini-assignments, final exam

<b>Social Work Value</b>	<b>How it is addressed</b>
Service	Social work research's primary goal is to help people in need and to address social problems through empirical work.
Social justice	Research analyses that illuminate social injustices and discussion of how scholars can disseminate research to address these issues.
Dignity & worth of individuals	Good social work research considers individual differences and respects cultural and ethnic diversity. It helps promote self-determination and addresses ways in which clients' lives can be improved.
Importance of human relationships	Good social work research addresses the wellbeing of individuals, families, social groups, organizations, and communities.
Integrity	Research-informed and evidence-based practice meets the ethical standards of social work practice.
Competence	A knowledge of research helps social workers develop confidence and enhance their professional expertise.
Scientific inquiry	Social work research = scientific inquiry.

### Course Materials

Hoffmann, J.P. & Shafer, K. (2015). *Linear Regression Analysis: Assumptions and Applications*. Washington, D.C.: NASW Press.

### Grading Scale

A 100-95%	B- 82.0-80%	D+ 69.9-67%
A- 94.9-90%	C+ 79.9-77%	D 66.9-63%
B+ 89.9-87%	C 76.9-73%	D- 62.9-60%
B 86.9-83%	C- 72.9-70%	E 59.9% and lower

## **Grading Policy**

1. Assignments are due by 10:45am on the proscribed due date and should be turned in via Learning Suite.
2. Late assignments will be accepted until assignments turned-in on time are graded. Late assignments will be penalized 25% of full value (i.e., if an assignment worth 100 points is turned in late, the maximum score you could receive is 75 points).
3. I am happy to discuss any questions you have about how I graded your assignment. I ask that you come by during office hours or make an appointment to chat in-person about it. Please bring your paper with you.
4. Any assignments using Stata should have an attached do file, with comments indicating what you did in each command. This will allow me to help you and see what you did if any issues arise.
5. Neither myself, nor the TA will “pre-grade” your assignments. In other words, we are more than happy to help with your specific questions, but we will not “look over” an assignment before you turn it in. Further, consultation with a professor or TA does not guarantee a certain grade and any final product is the sole responsibility of the student.
6. Quizzes, tests, and exams are an evaluation of an individual’s skill, ability, and comprehension of course materials, not collective knowledge among classmates or a cohort. As such, the production of online study guides or reading guides (i.e., dividing chapters up in a book and sharing that information with others) is not permitted. Students cannot produce documents that they can share with others via social media, online collaborative documents (i.e., Google Docs or files uploaded to the cloud), or through other means. Students ARE permitted to study together, as long as the notes they produce from these sessions are their own and are not shared with others. Producing or using a collaborative study guide is considered academic misconduct.
7. Producing homework assignments where results, models, and content are not substantially different from one another is also considered collaborative and is unacceptable. Students are also permitted to seek help from others in order to complete their individual assignment, but the final document must be their own work (results, write-up, substantial differences in assignments, etc.). Producing a collaborative assignment is academic misconduct.
8. Possible actions for academic misconduct could include any combination of the following: (1) receiving a reduced grade or zero on any assignment or exam; (2) having to redo the assignment; (3) a failing grade in the course; (4) referral to the Honor Code Office for the possibility of further discipline at the university level; and/or (5) other actions deemed necessary by the instructor. Additional information on academic misconduct is listed below.

## **Attendance Policy**

Students may miss up to two classes for any reason. These reasons include illnesses (additional absences for extreme illnesses may be considered excused on a person-by-person basis). As a result, it is recommended that you use these absences prudently. If a student misses more than 5 minutes of any class they will be counted as absent for the day. Generally, excused absences are only given to students for events that are directly associated to an MSW education and the mission of the School of Social Work (i.e., a conference presentation) or a critical life event. In these exceptional circumstances, it is your responsibility to inform me of your absence before hand, if at all possible. Each additional missed class above the two permitted absences (not counting excused absences) will result in a one-third letter grade deduction in your final grade (i.e., from A- to B+).

## Expectations

I think that many common issues in a course, such as attendance, grading, etc. can be circumscribed into the following: *work hard, learn a lot, don't complain (too much), and practice good self-care*. There are a couple of specific issues that are worth addressing in greater depth, however.

1. Please pay attention in class and come prepared. It is disrespectful to instructors and fellow students when someone, who is clearly focused elsewhere or has not given any effort to do the readings, reengages in the class and then asks questions about material from which we've moved on.
2. Learning takes time and effort. As an instructor, I am aiming to not only teach you important information and skills, but to help you learn how to find answers yourself. There is a wealth of information that can be learned from journal articles, as well as plenty of statistical help on Google, YouTube, and other websites. Obviously, I am not hoping to leave you on your own to struggle aimlessly (so please speak up if you feel this way), but don't be surprised if I provide you with resources to search rather than direct answers.
3. It is obviously unacceptable for students to use pejorative or offensive terms when directed toward others. But, it is equally troubling when used as an adjective (i.e., that is so gay/retarded/etc.). Such language does not respect the dignity and worth of all persons, nor is it becoming of a social worker or disciple of Christ.
4. Scheduling appointments, etc. right before class or right after that will make you late or miss a portion of the class is inappropriate. While I don't believe my class is more important than any other, I also don't feel it's any less important. Please treat it as such.
5. Generally speaking, I don't have a problem with technological devices if they are used properly in the classroom. I do not like it when students are texting, online chatting, visiting social media, etc. during class. Please refrain from using technology improperly during class.
6. Please come to office hours or make an appointment with the professor or TA to discuss any substantial problems you have with the course content. "Popping in" to ask quick clarifying questions typically turns into much longer, involved conversations. I'd like to give you my full and undivided attention when we meet, which isn't possible when students pop-in. In advance of our meeting I ask that you prepare some specific questions you have about content, etc. Doing so respects your time and the time of instructors and fellow students.
7. I'm open to discussions about course content, assignments, grades and the like. But, I'm not open to whining, protest, or complaining. Feel free to openly discuss things, but please help make it a civil, open, and kind dialogue.

## **Assignments**

Introductory Stata Workshop (10 points). The Research Support Center (116 SWKT) presents free workshops the second and third week of each semester and you must attend at least one of these. If it is absolutely impossible to fit one into your schedule, please contact me and we can arrange something else.

Term Paper (100 points). A major aim of this class is to help students write a publishable research paper (approx. 20 pages) on a topic of their choice. This isn't as overwhelming as it might seem at first - you can think of this as a combination of four 4-page papers (introduction/lit review, method, results, and discussion, plus references and tables). Please see the rubric (forthcoming) for details. You are welcome to turn in a full draft at any point (prior to the last day of class) to receive feedback, so long as it is a complete draft.

Paper Section Drafts (75 points). Throughout the semester, you will be required to turn in a draft of your introduction, methods and results, and discussion. These will be graded on whether or not you turned them in, not on content. These are meant to help you move your paper along at a reasonable pace and receive feedback on your progress. The quality and detail of feedback you will receive will depend on how detailed and complete your draft is. Each draft is worth 25 points.

Fulton Conference Poster Presentation (50 points). Each student will present her/his paper as a poster at the Mary Lou Fulton Mentored Research Conference on April 12, 2018.

Mini-assignments (150 points). There are 6 mini-assignments that need to be completed throughout the semester. Each assignment is worth 25 points.

Midterm Exam (75 points). Students will be given a take-home midterm exam in February.

Professionalism, attendance, and participation (25 points). See expectations section for information on this grade.

## **University Policies**

### *Honor Code*

In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are asked to adhere to the Dress and Grooming Standards. It is the university's expectation, and every instructor's expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

### *Sexual Misconduct*

As required by Title IX of the Education Amendments of 1972, the university prohibits sex discrimination against any participant in its education programs or activities. Title IX also prohibits sexual harassment, including sexual violence, committed by or against students, university employees, and visitors to campus. As outlined in university policy, sexual harassment, dating violence, domestic violence, sexual assault, and stalking are considered forms of "Sexual Misconduct" prohibited by the university.

University policy requires any university employee in a teaching, managerial, or supervisory role to report incidents of sexual misconduct that come to their attention through various forms including face-to-face conversation, a written class assignment or paper, class discussion, email, text, or social media post. If you encounter Sexual Misconduct, please contact the Title IX Coordinator at [t9coordinator@byu.edu](mailto:t9coordinator@byu.edu) or 801-422-2130 or Ethics Point at <https://titleix.byu.edu/report> or 1-888-238-1062 (24-hours). Additional information about Title IX and resources available to you can be found at <http://titleix.byu.edu>.

### *Student Disability*

Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete this course successfully, please contact the University Accessibility Center (UAC), 2170 WSC or 422-2767. Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. The UAC can also assess students for learning, attention, and emotional concerns. Services are coordinated with the student and instructor by the UAC. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures by contacting the Equal Employment Office at 422-5895, D-285 ASB.

### *Inappropriate Use of Course Materials*

All course materials (e.g., outlines, handouts, syllabi, exams, quizzes, PowerPoint presentations, lectures, audio and video recordings, etc.) are proprietary. Students are prohibited from posting or selling any such course materials without the express written permission of the professor teaching this course. To do so is a violation of the Brigham Young University Honor Code.

### *Mental Health Concerns*

Mental health concerns and stressful life events can affect students' academic performance and quality of life. BYU Counseling and Psychological Services (CAPS, 1500 WSC, 801-422-3035, [caps.byu.edu](http://caps.byu.edu)) provides individual, couples, and group counseling, as well as stress management services. These services are confidential and are provided by the university at no cost for full-time students. For general information please visit <https://caps.byu.edu>; for more immediate concerns please visit <http://help.byu.edu>.

## Schedule

Schedule is subject to change. I will contact you via email and inform you in class if there are any substantive changes in readings or assignments. Readings found on Learning Suite are noted by (LS).

Dates, Topics, Assignments	Readings
<b>Week 1</b> 1/8: Review, Introduction to the course 1/10: Stats Review and Bivariate regression	Hoffmann & Shafer, Chapters 1 & 2
<b>Week 2</b> 1/15: No class—MLK day 1/17: Bivariate regression	
<b>Week 3</b> 1/22: Multiple regression, <b>Mini-assignment #1 due</b> 1/24: Multiple regression	Hoffmann & Shafer, Chapter 3
<b>Week 4</b> 1/29: Multiple regression, <b>Mini-assignment #2 due</b> 1/31: Multiple regression	Hoffmann & Shafer, Chapter 4
<b>Week 5</b> 2/5: Factor Analysis, <b>Introduction draft due</b> 2/7: Factor Analysis	Hoffmann, Chapter 10 (LS)
<b>Week 6</b> 2/12: Logistic regression, <b>Mini assignment #3 due</b> 2/14: Logistic regression	Hoffmann & Shafer, Chapter 13
<b>Week 7</b> 2/19: No class—President’s day 2/20: Monday instruction—No Class, <b>Mini assignment #4 due</b> , Midterm Exam begins (Covers weeks 1-6) 2/21: No Class – Midterm exam	
<b>Week 8</b> 2/26: Non-linearity, <b>Midterm exam due</b> 2/28: Non-linearity	Hoffmann & Shafer, Chapter 10 (pp. 126-139)
<b>Week 9</b> 3/5: Moderators, <b>Mini assignment #5 due</b> 3/7: Moderators	Hoffmann & Shafer, Chapter 10 (pp. 140-148)
<b>Week 10</b> 3/12: Moderators, <b>Method and Results draft due</b> 3/14: Moderators	
<b>Week 11</b> 3/19: Mediators 3/21: Mediators	Reading TBA
<b>Week 12</b> 3/26: Missing data, <b>Discussion draft due</b> 3/28: Missing data *3/29: Deadline for Fulton Conference submissions (12:00pm)	Reading TBA
<b>Week 13</b> 4/2: Specification errors 4/4: Specification errors	Hoffmann & Shafer, Chapters 8 & 9

<p><b>Week 14</b>  4/9: Specification errors, <b>Mini-assignment #6 due</b>  4/11: Specification errors  *4/12: Fulton Mentored Research Conference</p>	<p>Hoffmann &amp; Shafer, Chapter 11 (pp. 151-159) &amp; Chapter 12</p>
<p><b>Week 15</b>  4/16: Regression for count data  4/18: Catch-up and Review</p>	<p>Hoffmann, Chapter 6 (LS)</p>
<p><b>Finals week</b>  4/25: Final paper due</p>	