University of North Texas at Dallas
Fall 2019
SYLLABUS

SOCI 3280 030: Quantitative Data Analysis (Statistics)   3Hrs

Department of	Sociology		School of	Liberal Arts and Sciences

Instructor Name:	*Dr. Aaron Bartula*
Office Location:	*DAL 2 #320*
Office Phone:	*972-780-3629*
Email Address:	*Aaron.Bartula@untdallas.edu*

Office Hours:	**M 9:00am-11:00m; T 9:00am-10:00am; W 9:00am-11:00am; TH 9:00am-10:00am**
Virtual Office Hours:	**T 12:00:-2:00pm** *or Anytime via email, usually will respond within 24 hours*

Classroom Location:	*Online*

Course Catalog Description:	This course prepares students in the application of quantitative research methodology and statistical analysis in sociology and other social science disciplines. Examples using real research data will be provided to facilitate understanding and application of various quantitative and qualitative processes.

Prerequisites:	**SOCI 3220 Qualitative Data Collection**
Required Text:	**Levin, J., Fox, J.A., & Forde, D.R. (2014).** *Elementary Statistics in Social Research*, **12th edition (Access Card), Allyn, Bacon, & Longman., Fox,** **ISBN: 0134238788**

Recommended Text and References:	This is an intensive course. Students in this class are highly encouraged to acquire a calculator with basic algebraic functions.

Access to Learning Resources:	UNT Dallas Library:
	    phone: (972) 780-1616
	    web: http://www.unt.edu/unt-dallas/library.htm
	    email: library@untdallas.edu
	UNT Dallas Bookstore:
	    phone: (972) 780-3652
	    web: http://www.untdallas.edu/bookstore
	    e-mail: untdallas@bkstr.com

Course Goals or Overview:

The goal of this course is to introduce quantitative analysis techniques and how they are applied in social science research.

Learning Objectives/Outcomes: At the end of this course, the student will

1	Be able to explain and differentiate the concepts of sample and population.
2	Understand and apply concepts of probability.
3	Formulate hypotheses that require the use of quantitative research methodology.
4	Identify the appropriate quantitative tools based on the research question.
5	Demonstrate the ability to apply statistical models to real world research questions.
6	Demonstrate the ability to compute and interpret statistical data in context.
7	Demonstrate the ability to connect statistical findings to population and draw inference.

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated in class or via class email or Canvas announcement. Additional readings and activities may be added, these will be noted in the Readings and Activities/Assignments sections.

Schedule	Topic	Activities	Due Dates
Week 1: 8/26/2019 – 9/1/2019	**MODULE 1:** Syllabus, Why We Use Statistics **Readings**: pgs. 1-25 **Problems**: pgs. 25-29	1. **Pre-Quiz** 2. **Extra Credit Introduction** 3. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 8/30/2019 by 5pm **Extra Credit Introduction (5pts)**: NO LATER than 9/1/2019 by 5pm **End of Week Quiz 1**: NO LATER than 9/1/2019 by 5pm
9/2/2019	**LABOR DAY NO CLASS!!!**		
Week 2: 9/3/2019 – 9/8/2019	Organizing the Data **Readings**: pgs. 33-72 **Problems**: pgs. 72-79	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 9/6/2019 by 5pm **End of Week Quiz 2**: NO LATER than 9/8/2019 by 5pm
9/11/2019	**Last Day to Drop Without a Penalty**		
Week 3: 9/9/2019 – 9/15/2019	Measures of Central Tendency **Readings**: pgs. 81-96 **Problems**: pgs. 96-101	1. **Pre-Quiz** 2. **Discussion Board** 3. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 9/13/2019 by 5pm **Discussion**: NO LATER than 9/15/2019 by 5pm **End of Week Quiz 3**: NO LATER than 9/15/2019 by 5pm
Week 4: 9/16/2019 – 9/22/2019	Measures of Variability **Readings**: pgs. 104-125 **Problems**: pgs. 125-130	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 9/20/2019 by 5pm **End of Week Quiz 4**: NO LATER than 9/22/2019 by 5pm
Week 5: 9/23/2019 – 9/29/2019	**EXAM 1**	1. **Exam**	**EXAM 1** NO LATER than 9/29/2019 by 5pm
Week 6: 9/30/2019 – 10/6/2019	**MODULE 2:** Probability and the Normal Curve **Readings**: pgs. 135-164 **Problems**: pgs. 165-171	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 10/4/2019 by 5pm **End of Week Quiz 6**: NO LATER than 10/6/2019 by 5pm
Week 7: 10/7/2019 – 10/13/2019	Samples and Populations **Readings**: pgs. 173-209 **Problems**: pgs. 209-213	1. **Pre-Quiz** 2. **Discussion Board** 3. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 10/11/2019 by 5pm **Discussion**: NO LATER than 10/13/2019 by 5pm **End of Week Quiz 7**: NO LATER than 10/13/2019 by 5pm
Week 8: 10/14/2019-10/20/2019	Testing Differences Between Means **Readings**: pgs. 217-262 **Problems**: pgs. 262-274	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 10/18/2019 by 5pm **End of Week Quiz 8**: NO LATER than 10/20/2019 by 5pm
Week 9: 10/21/2019–10/27/2019	Analysis of Variance (ANOVA) **Readings**: pgs. 276-308 **Problems:** pgs. 308-316	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz**: NO LATER than 10/25/2019 by 5pm **End of Week Quiz 9**:

			NO LATER than 10/27/2019 by 5pm
Week 10: 10/28/2019 – 11/3/2019	**EXAM 2**	1. **Exam**	**EXAM 2** NO LATER than 11/3/2019 by 5pm
11/8/2019	**Last Day to Drop With a "W"**		
Week 11: 11/4/2019 – 11/10/2019	**MODULE 3:** Non-Parametric Tests of Significance **Readings**: pgs. 319-349 **Problems**: pgs. 349-360	1. **Pre-Quiz** 2. **Discussion Board** 3. **End of Week Quiz**	**Pre-Quiz:** NO LATER than 11/8/2019 by 5pm **Discussion:** NO LATER than 11/10/2019 by 5pm **End of Week Quiz 11:** NO LATER than 11/10/2019 by 5pm
Week 12: 11/11/2019–11/17/2019	Correlation **Readings**: pgs. 365-389 **Problems**: pgs. 389-398	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz:** NO LATER than 11/15/2019 by 5pm **End of Week Quiz 12:** NO LATER than 11/17/2019 by 5pm
Week 13: 11/18/2019–11/24/2019	Regression Analysis **Readings**: pgs. 400-434 **Problems**: pgs. 434-441	1. **Pre-Quiz** 2. **End of Week Quiz**	**Pre-Quiz:** NO LATER than 11/22/2019 by 5pm **End of Week Quiz 13:** NO LATER than 11/24/2019 by 5pm
11/25/2019-12/1/2019	**THANKSGIVING BREAK, NO CLASS!!!**		
Week 14: 12/2/2019 – 12/8/2019	Non-Parametric Measures of Correlation; Choosing the Statistical Procedures for Research Problems **Readings**: pgs. 444-464 **Problems:** pgs. 464-473 **Writing Assignment are DUE!!** *NOTE: The Writing Assignment MUST be submitted to me via my UNT Dallas email address at aaron.bartula@untdallas.edu by December 8, 2019.*	1. **Pre-Quiz** 2. **End of Week Quiz** 3. **Writing Assignment**	**Pre-Quiz:** NO LATER than 12/6/2019 by 5pm **End of Week Quiz 14:** NO LATER than 12/8/2019 by 5pm **Writing Assignment** NO LATER than 12/8/2019 by 5pm
Finals Week (15): 12/9/2019 – 12/14/2019	**FINAL EXAM (3)** *NOTE December 14, 2019 is a SATURDAY!!!*	1. **Exam**	**FINAL EXAM** NO LATER than 12/14/2019 by 5pm

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – *written tests administered via Canvas designed to measure knowledge and application of presented course module material.*

Pre-quizzes - *written quizzes administered via Canvas designed to measure knowledge and application of the week's presented material and to adequately prepare the student for the end of chapter quiz.*

End of Week Quizzes – *written quizzes administered via Canvas designed to measure knowledge and application of the week's presented material.*

Class Discussions – *Participation in class discussion forums.*

Writing Assignment – *there will be one writing assignment in this course that must be submitted to me via my UNT Dallas email address at* aaron.bartula@untdallas.edu.

Grading Matrix:

Activities/Assignments	Value (points)	Total
Exams	3 exams at 100 points each	300
End of Week Quizzes	11 at 30 points each	330
Class Discussions	3 discussions at 20 points each	60
Writing Assignment	1 at 100 points	100
Total:		**790**

Grade Determination:
A = 790 – 711 pts; i.e. 90% or better
B = 710 – 632 pts; i.e. 80 – 89 %
C = 631 – 553 pts; i.e. 70 – 79 %
D = 552 – 474 pts; i.e. 60 – 69 %
F = 473 pts or below; i.e. less than 60%

No discussion about grades/points will be done through the internet or <u>with anyone other than the student</u> (FERPA law). Please make an appointment and I will happily discuss them or other concerns.

University Policies and Procedures

Students with Disabilities (ADA Compliance):

Chapter 7(7.004) Disability Accommodations for Students

The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Disability Services Office website at http://www.untdallas.edu/disability. *You may also contact them by phone at 972-338-1777; by email at* UNTDdisability@untdallas.edu or at Building 2, room 204.

Canvas Learn Accessibility Statement:
University of North Texas at Dallas is committed to ensuring its online and hybrid courses are usable by all students and faculty including those with disabilities. If you encounter any difficulties with technologies, please contact our ITSS Department. To better assist them, you would want to have the operating system, web browser and information on any assistive technology being used.

***NOTE*: Additional instructional technology tools, such as Turnitin, Respondus, Panopto, and publisher cartridge content (i.e. MyLab, Pearson, etc.) may NOT be fully ADA compliant. Please contact our Disability Office should you require additional assistance utilizing any of these tools.**

Course Evaluation Policy:
Student's evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider students' evaluations to be an important part of your participation in this class.

Assignment Policy:

Exams - *Three exams will be given over the course of the semester via Canvas. Each exam will consist of a combination of multiple choice questions and calculations. Each exam will be open on the scheduled Monday at 8am and close on the following Sunday at 5pm.* **In other words, each exam must be completed NO LATER than 5pm on the scheduled Sunday due date!!!** *There are no time limits for the exams.*

Pre Quiz – *Each non-Exam week, a pre-quiz will be given in order to prepare the student adequately for the end of the week quiz.* **NOTE: The pre-quizzes are not for a grade, HOWEVER, the student should complete the pre-quiz each week prior to beginning the end of week quiz. This will provide each student the greatest opportunity for success in the course..** *Each pre-quiz will consist of 3-7 questions. You have as many attempts as necessary to complete.* **Thus, if you do not do well the first time, you may try and try again!!!** *Each pre-quiz will open on Monday each week.* *There are no time limits for the pre-quizzes.*

End of Week Quizzes – *Each non-Exam week, an end of the week quiz will be given via Canvas. Each quiz will consist of multiple choice questions and calculations.* **You will only have one attempt at each end of the week quiz.** *The questions will be given one at a time and you will be allowed to revisit previous questions.* **Each end of week quiz must be completed NO LATER than 5pm on the scheduled Sunday due date!!!** *There are no time limits for the end of week quizzes*.

Class Discussions – *Three class discussion forums will make up part of the final grade. In order to receive the full credit, each student is required to be PREPARED (having read the required readings –text, lecture slides) and attempted problems at the end of each chapter, prior to participating in the forum discussions. Using the assigned reading material as a foundation, each student is to:*

1) **Answer the week's thread question as it applies to the course material** *(worth 5 points per week).*
2) **Respond to another student's posting related to the course material** *(worth 5 points per week).*
   a. **Must identify which thread post you are responding to!!**
   b. **Confirm or contradict an assertion made from a classmates post and explain why.**

NOTE: Each thread post must be 5 or more sentences.

If the student is prepared and participates with both responses each week in the discussion forum, adhering to the above guidelines, they will receive full credit, if they are not prepared and participate they will receive partial credit, and/or if they do not complete both responses per week, lastly, if they do not participate they will receive no credit.

Note the problems at the end of each chapter are not for a grade, they are intended to prepare each student to succeed in the discussion forums, end of week quizzes, and exams. ***In order to succeed in this class, you must continually practice; more simply, complete practice problems each week to prepare yourself!!***

Writing Assignment – *A writing assignment is required in this course. Each student must take a dataset that will be provided via Canvas and write a brief 2 page summary of the findings between at least two variables and potential reasons of said findings. More specifically, you must identify groups of at least two different variables and using the appropriate statistical techniques discussed during the course, assess at least five relationships/trends from the selected variables and discuss any potential reasons for the relationships. Note these do not have to be the actual reasons, I simply want you to critically think about and discuss what could be causing the correlations. The writing assignment MUST be submitted to my UNT Dallas email address (aaron.bartula@untdallas.edu). The assignment must be TYPED with **12 point Times New Roman font, 1 inch margins, and Double Spaced.** The paper must include the following information:*

1) *A copy of the dataset/results.*
2) *Your name*
3) *Chose groups of at least two different variables.*
4) *Determine significance in the data using the appropriate analysis techniques for the data.*
5) *Discuss potential causes for each significance/non-significance finding. Note these potential causes are hypotheses and are not either correct or false.*

All class announcements will be posted on Canvas, and/or sent via email. It is your responsibility to check Canvas and your e-mail early and often. ***Ignorance to any posted announcement will not be an excuse.***

Exam and Quiz Policy:
Exams should be taken as scheduled. Each QUIZ and EXAM must be completed in Canvas **NO LATER than 5pm on the scheduled date**. **No late or makeup quizzes or examinations will be allowed** *except for documented emergencies (See Student Handbook). It is your responsibility to contact me during the first two weeks of class if there's anything about which I should know concerning special accommodation for any of the assignments. I will try to work out a suitable arrangement, but I must know about it during the first two weeks of class. It is also your responsibility to bring me the required documentation(s) or have the responsible parties contact me in a timely manner for any kind of special accommodation for any of the assignments.*

Academic Integrity:
Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic

Integrity at http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf for complete provisions of this code.

Classroom Policies

Online Attendance and Participation:

The University attendance policy is in effect for this course. Class attendance in the Canvas classroom and participation is expected because the class is designed as a shared learning experience, and because essential information not in the textbook will be discussed in the discussion board. Online presence and participation in all class discussions is essential to the integration of course material and your ability to demonstrate proficiency. .

Attendance for this online or hybrid course is considered when you are logged in and active in Canvas, i.e., posting assignments, taking quizzes, or completing Discussion Boards. To maintain financial aid award eligibility, activity must occur before the census date of the session or term of the course. Refer to http://www.untdallas.edu/registrar for specific dates. If you are absent/not active in the course shell, it is YOUR responsibility to let the instructor know immediately, upon your return, the reason for your absence if it is to be excused. All instructors must follow university policy 7.005 covering excused absences; however, it is the instructor's discretion, as outlined in the course syllabus, of how unexcused absences may or may not count against successful completion of the course

Inclement Weather and Online Classes: *Online classes may or may not be effected by campus closures due to inclement weather. Unless otherwise notified by your instructor via e-mail, online messaging, or online announcement, students should assume that assignments are due as scheduled.*

Online "Netiquette:
In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. Emails, Discussion Board messages and/or any other forms of written communication in the online environment should use proper "netiquette" (i.e., no writing in all caps (usually denotes yelling), no curse words, and no "flaming" messages (angry, personal attacks).

Racial, ethnic, or gender slurs will not be tolerated, nor will pornography of any kind.

Any violation of online netiquette may result in a loss of points or removal from the course and referral to the Dean of Students, including warnings and other sanctions in accordance with the University's policies and procedures. Refer to the Student Code of Student Rights Responsibilities and Conduct at http://www.untdallas.edu/osa/policies. Respect is a given principle in all online communication. Therefore, please be sure to proofread all of your written communication prior to submission.

Diversity/Tolerance Policy:
Students are encouraged to contribute their perspectives and insights to class discussions in the online environment. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Dean of Students as the instructor deems appropriate.

Technology Requirements: *In order to successfully access the materials in an online or hybrid course, UNT Dallas advises that your computer be equipped with the minimum system requirements.*

Canvas is the platform software for this course. Canvas supports major web browsers such as Windows Internet Explorer, Apple Safari, Mozilla Firefox, and Google Chrome. However, since the latter two are updated continually, some recent versions may not be compatible. If you experience difficulty accessing or using components of the course, try using Internet Explorer. Also, no matter what browser you use, always enable pop-ups. For more information see:

- http://www.untdallas.edu/dlit/ecampus/requirements
- https://learn.unt.edu/bbcswebdav/institution/BrowserCheck/check_full.html