University of North Texas at Dallas
Fall 2024

PSCI 4350 – Sec 0001: Quantitative Research 3 Hrs.			
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Department of	**Liberal Arts and Sciences**	**Division of**	**Political Science & History**
Instructor Name:	**Professor Curtis McDowell**		
Office Location:	**DAL 2: 230**		
Office Phone:	**--- 972-338-1564** **(I only answer and check phone messages when I am in the office from 9am-5pm. Please communicate by official university email if you want a prompt reply.)**		
Email Address:	**curtis.mcdowell@untdallas.edu (use this email communication for assignment related issues)**		
Office Hours:	**Wednesdays from 11- 12:30pm and by appointment**		
Virtual Office Hours:	**Technically my hours will be ONLY 12-1pm on Thursday. BUT you may email at any time (using UNT Dallas email only). I will answer within 24 hours.**		
Classroom Location:	**Lab: DAL1- 204**		
Class Meeting Days & Times:	**Wednesdays: 1 pm – 3:50pm**		
Course Catalog Description:			
Prerequisites:	**None**		
Co-requisites:	**Basic Algebra**		
Required Text:	**Urdan, Tim (2017), Statistics in Plain English - 4th Edition.: Routledge NY** **ISBN - 978-1-13883-833-8 (hbk)** **ISBN - 978-1-13883-834-5 (pbk)** **ISBN - 978-1-31572-311-2 (ebk)** **Pollock III, Phillip (A Stata Companion to Political Analysis 1st Edition.: Sage** **ISBN-13:** 978-1452240428 (pbk) **ISBN-10:** 1452240426		
Data Sets used - General Social Survey – 2002	http://www.gss.norc.org/get-the-data/stata		
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fheg.follett.com		

Course Goals or Overview:

	Learning Objectives/Outcomes: The goals of this course are the student will:
1	Be able to classify the key elements of administrative research and note why it is important.
2	Produce information that shows understanding of the scientific method is and why it issued by decision makers.
3	Prepare a list of the goals of basic and applied research and to understand how these are related;
4	Illustrate how to conduct, evaluate and critically evaluate research

General Education objectives

5	The course is designed to enhance critical thinking through inquiry and analysis and the creative linking of disparate or similar concepts.
6	The course is designed to enhance written, oral and reading skills to promote communication.
7	The course is designed to ensure UNT Dallas graduates are socially responsible, research methods competency, and professional engaged through enhanced knowledge of the value of research and its advantages, and through various design approaches underlying administrative leadership and policy.
8	The course promotes personal responsibility through discussions of ethical problems and reasoning in the public sphere.
9	Taken together, these general education objectives are designed to achieve the ultimate goal of the university, to provide a foundation and skills for you to continue learning long after you have left the university.

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the instructor in class and by posting on Blackboard.

Week	Class Instruction	Tasks

Week 1 & 2	Types of Data - LECTURE
	
	Chapter 1 Types of data, charts, and graphs
	    o Introduction to Social Science Research Principles and Terminology
	    o Populations, Samples, parameters, and Statistics
	    o Inferential and Descriptive Statistics
	    o Sampling Issues
	    o Types of Variables and Scales of Measurement
	    o Research Design
		Stata Assignments
		Work Problems – Chapter 1
		
		• Stata set up
		• Stata spreadsheet – Sample data
		• Stata Commands
		
		Discussion Board 1

Week 1 & 2	**Chapter 2**
	    o Measures of Central Tendency
	    o Measures of Central Tendency in Depth
	    o Making Sense of Distributions and Graphs
	    o Let's talk about STATA
	        • Ex: Mean, Median and Mode – Skewed Distributions
		Work Problems – Chapter 2
		
		Discussion Board 2
		
		Review graphs
		Histogram
		Stem plot
		Bar chart
		Pie chart

Week 3	Looking at Data—Relationships - LECTURE
	
	Chapter 3
	    o Measures of Variability
	    o Range
	    o Variance
	    o Standard Deviation
	    o Measures of Variability in Depth
	    o Why have variance?
	        • Ex: Examining Range, Variance and Standard
		Stata Assignments
		Work Problems – Chapter 3
		
		<u>Review STATA functions:</u>
		    o Do-files
		    o Log –Files
		    o Basic functions in STATA
		    o Describe
		    o List
		    o Codebook
		    o Sorting data
		    o Summarize
		    o Browse

Week 3-4	**Chapter 4**
	    o Normal Distribution
	    o Characteristics of Normal Distribution
	    o Why is Normal Distribution so Important?
	    o The Relationship Between the Sampling Method and the Normal Distribution
	    o Skew and Kurtosis
		Work Problems – Chapter 4
		
		Discussion Board 3

Week 4 - 7	Looking at the Strength —Relationships - LECTURE
	
	Chapter 5
	    o Standardization and z Scores
	    o Standardization and z Scores in Depth
	    o Interpreting z Scores
	        • Ex: Comparing Raw and z Scores
		Stata Assignments
		Work Problems – Chapter 5

		Work Problems – Chapter 6

	Chapter 6
	   o Standard Errors
	   o What Is Standard Error?
	   o Standard Error in Depth
	   o How to calculate the Standard Error of the Mean
	   o The Central Limit Theorem
	   o The Normal Distribution and t – Distributions: Comparing z scores and t – Values
	      • Ex: sample Size and Standard Deviation Effects on the Standard Error Worked Examples	

	Chapter 7
	   o Statistical Significance, Effect Size, and Confidence Intervals
	   o Statistical Significance In Depth
	   o Limitations of Significance Testing
	   o Effect Size In Depth
	   o Confidence Intervals in Depth
	      • Ex: Statistical Significance, Confidence Intervals, and Effect Size for a One-sample t – Test of Motivation
		Work Problems – Chapter 7
		Discussion Board 4

Midterm 1 – In canvas	

	Tools to Measure Data - Relationships - LECTURE
	Chapter 8
	   o What Is a t – Test?
	   o t – Distribution
	      o The One Sample t – Test
	   o The Independent t – Test
	   o Dependent (Paired) Samples t – Test
	   o The Standard error of the Difference between Independent Sample Means
	   o Determining the Significance of the t Value for Independent Samples
	   o Paired or Dependent samples t Test in Depth
	      • Ex: Comparing Fifth and Sixth – Grade GPAs
		Week 9 - 11
		
		<u>Review Standard Error</u>
		   o Statistical Significance
		   o Correlational v. Causation
		   o Sampling variance
		
		Work Problems – Chapter 8

		Work Problems – Chapter 12
	Chapter 12 o Correlation o When to use Correlation and What it Tells Us o Pearson correlation Coefficients in Depth o A Brief Word on Other Types of Correlation Coefficients • Ex: The Correlation Between Grades and Test Scores	
		Work Problems – Chapter 9 ***Discussion Board 5***
	Chapter 9 o One Way Analysis of Variance o ANOVA – vs Independent t – Test o One – Way ANOVA – in Depth o Post Hoc Tests o Effect Size • Ex: Comparing the Sleep of 5 -, 8 -, and 12 Year Olds	
	Executing ANOVA – Tools - LECTURE **Chapter 10** o Factorial Analysis of Variance o When to Use Factorial ANOVA o Some cautions o Factorial ANOVA in Depth o Interpreting main Effects in the Presence of an Interaction Effect o Testing Simple Effects o Analysis of Covariance • Ex: Performance, Choice, and Public vs. Private Evaluation	Week 12-14 Work Problems – Chapter 10
	Chapter 11 o Repeated – Measures Analysis of Variance o When to use Each Type of Repeated – Measures Technique o Repeated – Measure ANOVA in Depth o Repeated – Measures Analysis of Covariance (ANCOVA) • Ex: Changing Attitudes about Standardized Tests	Work Problems – Chapter 11 ***Discussion Board 6***

		Work Problems – Chapter 14

	Chapter 14
	    o The Chi – Square Test of Independence
	    o Chi- Square Test of Independence in Depth
	       • Ex: Generational Status and Grade Level	

	Linear Relationships
	Chapter 13
	    o Regression
	    o Simple vs. Multiple Regression
	    o Variable Used in Regression
	    o Regression in Depth
	    o Multiple Regression
	       • Ex: Predicting the Use of Self – Handicapped Strategies
		Week 15
		
		Assignments:
		Work Problems – Chapter 13
		
		Discussion Board 7

Grading Matrix:

Instrument	Value (by percent)	Cumulative Total
Midterm 1	*10 percent*	10%
Work Problems	*30 percent*	30%
Midterm 2	*10 percent*	40%
Final Work Problem	*15 percent*	60%
Discussion Boards	*20 percent*	95%
Class participation	*15 percent*	**100%**
Total:	**100 percent**	

University Policies and Procedures

Students with Disabilities (ADA Compliance):
- *The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive. For more*

information, you may visit the Assistant Director of Disability Services | Student Affairs, Suite 200, Building 2 or call Cynthia Suarez, at 972.338.1777.

Student Evaluation of Teaching Effectiveness Policy:
- *The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. 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 the SETE to be an important part of your participation in this class.*

Assignment Policy:
- *Assignments come in several flavors. 1. At least five readings will be assigned, with associated quiz questions that focus on reading mastery and critical thinking. These will be handed out at the start of classes and may be submitted at any time, up to the deadline noted in the syllabus. Late assignments will be penalized 20 percent per day late. 2. Each Wednesday, I will post an online quiz on current affairs drawn from major national and state news media. You have until midnight Thursday to complete the quiz. Five percent of the grade will be drawn from the cumulative sum of these quizzes. If you do not complete the weekly quiz on time, you will get a zero for that quiz. 3. For each chapter and LAITS reading beginning with Fiorina Chapt. 2, a quiz will be posted online. Each quiz must be complete before the due date for the reading: this means that the online quiz will close at midnight of the day the reading is due. No credit is given for missed quizzes. 4. Format and citation requirements will be included on written and posted assignments on Blackboard. An American Political Science Association citation sheet provides details of bibliography and citation form, and it is posted on the class pages on Blackboard under the Writing folder.*

Exam Policy:
- ***All exams should be taken as scheduled and in class using your computer or laptop.** No makeup examinations will be allowed except for documented emergencies (See Student Handbook).*

- **Weekly Discussion Board:** Write a two-paragraph (10 sentences total) double-spaced statement with 2 or more takeaways obtained after reading the week's chapter or watching the CH# - Video Exercise (in Course Materials folder). Due every Friday on Canvas. This discussion should contain <u>takeaways</u> and <u>opinions</u> written in the student's own words. Quotations should be used sparingly and when used, the text should be included in quotes followed by the author, publication date and page (example: "Text quoted" (Schmid 2002, p. 17)). **Due: Weekly discussions should be posted no later than midnight every Friday.**

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.*

- *In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:*
- **On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.**
- *You will be required to sign the pledge to authenticate it.*

Bad Weather Policy:
- *On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.*

Attendance and Participation Policy:

- *The University attendance policy is substantially in effect for this course. However, you will be treated as responsible adults for most of the semester: you miss class at your own peril. Details of attendance policy will be discussed in class during the first session.*
- *Class attendance 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 class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation is essential to your ability to demonstrate proficiency in the subject.*
- *If you must miss a single, isolated class, you need not notify the instructor, but it becomes your responsibility to obtain notes of the missed class from your colleagues. I do not post the notes of my lectures. Before you ask the professor what was missed, you should have reviewed noted for the missed class.*
- *In the case of extended absences due to illness or crises, you are expected to inform the instructor as soon as possible about the extent of your absence, preferably before the absence occurs. You may be required to produce written evidence of the reasons for your absence.*
- *In all cases, missing exams and other assignments requires a good-faith effort on your part to inform the instructor of your absence beforehand. Unless you have a rock-solid reason for missing the test, you will not be permitted to make it up.*

Diversity/Tolerance Policy:

- *Students are encouraged to contribute their perspectives and insights to class discussions. 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 Office of Student Life as the instructor deems appropriate.*

Optional Policies:

- **FOR EMERGENCIES -----Do not attempt to communicate through the Canvas mail function.** I do not check it and I will not respond. Communicate through my official university e-mail listed at the top of this syllabus. I communicate with you by responding to whatever e-mail address you use to send your message. General notices are posted as announcements on Blackboard and/or as email to your official university address. Failure to check your email is no excuse for missing changes in test dates or assignments.
- **Students are expected to attend all virtual classes**, since much of the material is not drawn from the readings. The university wants instructors to take attendance (see above), so an attendance sheet will circulate at the end of class or at the beginning, varying on different days. Attendance does not enhance your grade, but failure to attend will lead to lower grades as much of the course material is not in the books. Missing class will also mean missing pop quizzes based on the readings.
- Entering class late is sometimes unavoidable. **If you enter late, you are expected to do so as unobtrusively and quietly as possible.** Please take a seat on the fringes of the class and do not disrupt the lecture by taking a first row seat. Do not attempt to hand in homework while the lecture is going on. If you must leave class, do so quietly.
- **Cell phones must be turned off.** Texting and twittering are not permitted.
- **Computers are a useful tool for taking notes in class, but these machines are often used for a number of other purposes such as emailing, web-surfing, game-playing etc. Obviously, note taking on a computer is permitted in class, but secondary uses are not. Students who are found to be using their computers for activities other than note-taking will be docked points for class participation.**
- Students are expected to have **read the assigned material before class**.
- Students are encouraged to participate frequently in discussions in class. Participation will make the instructor's calls on borderline grades easier to make.

- **There are no 'right' answers to many of the issues we will discuss**, and you will not be graded on your opinions. However, please take into account that opinions supported by facts are more persuasive than opinions supported by more opinions. Make your arguments accordingly.
- Students are expected to be considerate of others. This means silencing cell phones, arriving on time, not leaving early and being respectful of others during discussion and debate. **Flaming or intimidating fellow students will not be tolerated.** Opinions and arguments are fair game; the speaker is not. Listening courteously is a real world skill, and I have a commitment to civil discourse that I will enforce.
- I support my classes with PowerPoint presentations. However, **you will not have access to these presentations outside of class.** There are several reasons for this:
- One-time use of images and charts for teaching is fair use under current legal rulings, but were I to allow you permanent access to those images, I would have to secure formal permission from the owner of every image.
- Some students substitute post-lecture PowerPoint downloads for attending class or note-taking. Others substitute verbatim regurgitation of PwrPt material on tests and quizzes for the thoughtful analysis that earns high grades. Studies show that note-taking does enhance student performance, so please develop that skill.
- There is potential for an ownership dispute over course content posted online. The presentations constitute my work product, virtually all of which was assembled before I began teaching at UNTD. Many universities are now enamored with online courses, and some attempt to claim legal ownership of work prepared by individuals employed at the school or posted on university websites, whether or not the content was compiled on university time or published during university employment. My lectures were compiled by me over years of study, reading and research outside the UNTD environment and existed before I began teaching these courses. Previously assembled presentations were adjusted to fit UNT course requirements and mandated texts.

Signature _____ Date _____