

University of North Texas at Dallas
Fall 2015
SYLLABUS

PLDR 5300 Data Analytics and Research Methods I		3Hrs
Department of		Division of Business and Public Leadership
Instructor Name:	<i>Ronald Hy</i>	
Office Location:	<i>FH 228</i>	
Office Phone:	<i>972-338-1588</i>	
Email Address:	<i>ronald.hy@unt.edu</i>	
Office Hours:		
Virtual Office Hours:	Tuesday and Thursday 4:30 pm – 5:30 pm and by appointment	
Classroom Location:	Founders Hall (Dal 2) 336	
Class Meeting Days & Times:	Wednesday 5:30 pm, - 8:20 pm	
Course Catalog Description:	Introduction to applied research and statistical analysis. Topics include probability, descriptive statistics, hypothesis testing, contingency table analysis, regression analysis, and forecasting.	
Prerequisites:	None	
Co-requisites:		
Required Text:	Berk and Carey, DATA ANALYSIS WITH MICROSOFT EXCEL	
Recommended Text and References:		
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@fhq.follett.com	
Course Goals or Overview:		
	Managerial decisions are only as sound as the information available. Students, therefore, will learn to handle and take charge of information and analyze public policies objectively, systematically, and statistically.	
Learning Objectives/Outcomes: At the end of this course, the student will be able to:		
1	Use and apply analytical and statistical tools used to address public policies	
2	Use measures used to increase the understanding of the impact of decisions	
3	Possess the ability to integrate quantitative data into a written report	

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated via Blackboard.

TOPICS
INTRODUCTION - Handouts Functions of Statistics Measurement Levels of Data Decision making with Statistics
EXCEL Excel and Spreadsheets and Workbooks pp. 4-11 Worksheet Cells, pp.14-18 Printing from Excel, pp. 18-21 Saving Your Work, p. 22 Excel Add-Ins, pp.24-30 Statplus, pp. 30-32 Exiting Excel, p. 34
WORKING WITH DATA IN EXCEL Data entry, pp. 36-40 Data Formats, p. 41 Formulas and Functions, pp. 44-49 Sorting Data, p. 54; 71 Querying Data, pp. 55-62 Importing Data from Databases, p. 68
CHARTS AND GRAPHS Creating Charts, pp. 82 Scatterplots, p. 86 Editing a Chart, pp. 91-102 Identifying Data Points, pp. 105-109 Plotting Several Variables, p. 120
DESCRIPTIVE STATISTICS Variables and Descriptive Statistics, pp. 129 Frequency Tables, pp. 131-134 Histograms, pp. 138-143 Distributional Statistics, pp. 151-164
CONTINGENCY TABLES Tables, pp. 276-287 Tables with Nominal Data, pp. 288-292 Tables with Ordinal Data, pp. 277-399
PROBABILITY AND STATISTICAL INFERENCE Probability, p. 183 The Normal Distribution, p.193 Normal Distribution and Z scores, pp.235-239
HYPOTHESIS TESTING Developing a Hypothesis to Test 232-229 z- Distribution 225-228 t- Distribution 240-243 f- Distribution

LINEAR CORRELATION Linear Correlation, pp. 335-342 Scatter Plot, pp. 343-344 Spearman's Rank Order Correlation, pp. 337-338 Multiple Correlations, pp. 359-366 t Test for correlation Coefficients, pp. 362
SIMPLE LINEAR REGRESSION Using Simple Linear Regression, pp. 314-316 Regression Functions in Excel, pp. 316-318 Calculating Regression Statistics, pp. 318-325 Interpreting Regression Statistics, pp. 325-328 f Test for correlation Coefficients Checking the Regression Model, pp. 329-334
Quantitative Project due

Course Schedule

SCHEDULE (Assignment exercises due on day in the timeline)

TOPICS	TIMELINE
INTRODUCTION	Module 1
Assignment 1	Aug 29
EXCEL	
Assignment 2	Sept 5
WORKING WITH DATA IN EXCEL	
Assignment 2a	Sept 12
CHARTS AND GRAPHS	
Assignments 3-6	Sept 26
FIRST MODULE ASSESSMENT	Sept 29
DESCRIPTIVE STATISTICS CONTINGENCY TABLES	Module 2
Assignment 7 & 8	Oct 10
SECOND MODULE ASSESSMENT	Oct 13
PROBABILITY AND STATISTICAL INFERENCE	Module 3
Assignments 9 - 11	Oct 24
<u>Topic Approved</u>	Oct 16
THIRD MODULE ASSESSMENT	Oct 27
LINEAR CORRELATION	Module 4
Assignments 12-13	Nov 7
SIMPLE LINEAR REGRESSION	
Assignments 14 - 15	Nov 14
Assignments 16	Nov 28
FOURTH MODULE ASSESSMENT	Dec 4
Quantitative Project due	Dec 4

Course Format

The course uses a HyFlex format, a course design model that presents the components of hybrid learning (which combines face-to-face with online learning) in a flexible course structure that gives students the option of attending sessions in the classroom, participating online, or doing both. Students can change their mode of attendance weekly or by topic, according to need or preference. This is not a self-paced model. Students submit the same assessments at the same time, regardless of the chosen path through the material. In providing an online option, the model provides the flexibility to keep a student from falling behind if, for example, the student has to travel unexpectedly or the campus is closed due to weather or other circumstances.

Course Evaluation Methods

Assignments

Except for unavoidable circumstances, students will not be allowed to make up missed assignments.

Any student needing special accommodation because of a disability must inform the instructor at the beginning of the semester and mutually develop an accessibility plan.

Quantitative Project

Students will be responsible for developing and submitting a quantitative report. In addition to learning how to use various statistics and submitting appropriate assignments, students also will be responsible for a quantitative report that includes developing a testable hypothesis, collecting appropriate data and using an analytical methodology to analyze and interpret the data and write a project report. Each student's (1) topic, (2) testable hypothesis, (3) hypothesis operationalization, and (4) data source, and **approved by the instructor by October 16, 2015**. The project report will be approximately 5 pages typed and double spaced, not including exhibits and references. **The quantitative project is due December 4, 2015.**

Grading Matrix

Instrument	Value
Assigned Exercises	180
Module Assessments	250
Quantitative Project	50

Grade Determination:

A = 432

B = 384

C = 336

D = 288

F = less than 288

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 Student Life Office, Suite 200, Building 2 or call Laura Smith at 972-780-3632.

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.

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.

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: (Discuss your attendance and participation policy – sample given)

The University attendance policy is in effect for this course. 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 in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

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:

- Use of WebCT/Blackboard
- Use of Cell Phones & other Electronic Gadgets in the Classroom
- Food & Drink in the Classroom
- Use of Laptops
- Grade of Incomplete, "I"