DSCI 2710: Data Analysis with Spreadsheets Syllabus

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Office Hours: By appointment (in person or online) Class Hours: Mon - Wed 11:00 - 12:20 a.m.
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Course Description

Collection, description and analysis of qualitative and quantitative data. Data presentation, tables, charts and graphs, descriptive statistics, analysis of time series and index numbers, sampling techniques and distributions, estimation, confidence intervals, with applications in spreadsheets. This course is an Introductory Statistics equivalence with the state of Texas (MATH 1342 THECB approval ID: 27.0501.51 19). Understand that critical thinking, analysis, and evaluation are key to the format of this course.

Prerequisites

High-school eligibility for college level math course.

Course Learning Outcomes

At the end of the course, you should:

1. Have an increased appreciation for the use of statistics in business decision-making.
2. Be better able to select the appropriate statistical tool/methodology to aid in business decision- making.
3. Be able to use a computer spreadsheet program such as Excel to describe and analyze numerical data.
4. Be better able to communicate in the language of applied business statistics.
5. Have acquired a more positive attitude towards business statistics.
6. Be able to manipulate simple statistical formulae to solve non-verbal (numerical) problems.
7. Have an enhanced ability to follow directions and instructions.
8. Have a much better vision of how analytics are used in analysis and business decisions.
9. Understand more about the job/career potential of analytics and Decision Sciences.

Required Courseware & Suggested Textbook

- **Discovering Business Statistics** by Quinton Nottingham and James Hawkes ISBN: 978-1-64277-510-5 (Courseware + eBook). **The software access code is required** to complete the assignments (HLS Modules). To purchase access, you may do so either from the UNT bookstore or through your Hawkes account. To purchase through Hawkes, simply click the Hawkes Learning link in Canvas and click the Activate button on your dashboard.

For a full tutorial of the Hawkes website, please watch the following video.

For any questions or technical issues with the Hawkes courseware, please reach out directly to their Tech Support Team via LiveChat or phone (1-800-426-9538) (M-F 7 am-9 pm CST).

- **COURSE WEB SITE(S):** You will be using Hawkes Learning materials for this course. To access Hawkes, click the Hawkes Single Sign-On link in the Hawkes Learning Module through Canvas.
- **Canvas:** (https://unt.instructure.com/login/ldap) The lecture notes, Excel case files, Case quizzes, all of the exams, and other material will be posted on Canvas so please make sure you keep up and check Canvas often.
- **Microsoft Excel**, installed in computer labs and available to download (Office 365) at https://aits.unt.edu/support/office365apps.

Course General Policies & Guidelines

Teaching Method

- You are encouraged to pay attention to commercials and news items in print as well as audio- visual media to become aware of the wide use of statistics in our daily lives. To better assist you in understanding the use of these methodologies in business many of the class problems will be presented as simple business cases.
- You should study the material in the PowerPoint slides. You are strongly encouraged to try to independently solve the problems included in the lecture slides, not simply verify that the provided solutions "make sense".
- You should work on the homework assignments (HLS lessons and Excel case studies). The case studies and the Hawkes Learning lessons are intended to assist you in better structuring the learning time you spend on mastering the course material. Exam questions will mostly refer to these assigned exercises. The best way to prepare for exams is to go over the practice exams posted on Canvas.

Evaluation

To demonstrate your ability to use quantitative techniques in business, you will be evaluated on a number of homework assignments, Excel case studies, and exam questions. Rather than being purely numerical, exam and case problems will be presented in word format. Many Hawkes Learning (HLS) lesson assignments will also be presented in word format. You will work on Excel case studies that require you to use an Excel spreadsheet to analyze and describe real-world business data. By simulating real business problems and using the language of statistics, these evaluation instruments will reinforce the course objectives.

Brief notes about this course:

- This course is an Introductory Statistics equivalence with the state of Texas (MATH 1342 THECB approval ID: 27.0501.51 19) and involves collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, and confidence intervals. Understand that critical thinking, analysis, and evaluation are key to the format of this course.

- This course is intended for you to engage deeply with the materials and develop your own critical thinking and writing skills. For this reason, the use of Generative AI (GenAI) tools like [e.g., Claude, ChatGPT, and Gemini] is not permitted. While these tools can be helpful in some contexts, they do not align with our goal of fostering the development of your independent thinking. Any unauthorized use of GenAI to complete any part of an assignment, exam, or coursework will be considered a violation of academic integrity, as it prevents the development of your own skills, and will be addressed according to the Student Academic Integrity policy https://policy.unt.edu/policy/06-003.
- Doing the assignments is essential for success in this course. In fact, the assignments constitute a large portion of your grade in this course. You are encouraged to keep up with the homework and meet the submission deadlines.
- You should not hesitate to ask questions to me, (the professor, Dr. Palao). I will post on the discussion section on Canvas the commonly asked questions.
- Regular monitoring of the course material posted on Canvas is expected. There will be no make-up if you miss any of the mid-term exams unless you have a University-approved excuse. Whenever applicable, such an excuse is to be provided to the instructor in writing, as early as possible.
- Since large portions of the course are done in online environments (Hawkes and Canvas) without any in-class monitoring tools, I reserve the right to test you further on your submissions during the semester. I could randomly check your knowledge on the topics and see how you answered the assignments. As long as it is your work, you will NOT have any issues. Only students who plagiarize will be reported to the Dean of students for further actions. Remember, anything you submit to the class should be your work and you should be able to explain the answer and repeat/show the process again when questioned.
- You have the final responsibility for seeing that you properly withdraw before the scheduled last drop day, in case you wish to withdraw from/ drop the course. If you stop attending class, you should execute the drop procedure since failure to do so will result in a grade of "F" which cannot be changed.

DSCI 2710 Course-specific Assessment Policies

- **HLS Lessons:** Homework using the Hawkes Learning: Discovering Business Statistics is assigned. The due dates for the HLS lessons are listed on this syllabus. These form a significant part of the course grade and must be completed by the due date to receive full credit as well as bonus points (two extra credit points per assignment). Credit for the homework is applied upon the demonstration of mastery in the "Certify" section of the Hawkes Learning portal and there is no partial credit awarded for the homework that does not demonstrate mastery. Late homework submissions still receive full credit, provided they are completed by **the end of day on May 8th, 2026**; however, no bonus points are earned. No credit is awarded for any assignment completed after this date.
- **Excel Quizzes / Case Study:** Projects involving the use of Excel to analyze business data are assigned. These are an important part of the course grade and include a dataset and an

online quiz in Canvas to verify your Excel case comprehension and apply your knowledge on that quiz. There will be one business case study where you will be expected to conduct their own analysis using provided data in a spreadsheet. This will satisfy the Communication component for university accreditation. **No Late Submissions for the Case Studies are allowed.**

- **Exams:** There will be two exams in the course with a third makeup exam available for those that miss either the first or second exam. The third exam could also be used to replace a lower score on the previous exams. Final exams are held on the UNT scheduled final exam time (for details on final exam schedule check the site)

  There will be **no make-up exams**, except in case of excused absences recognized by the University of North Texas (observation of religious holiday, military service or wherein a student is representing the university in an official capacity such as athletics or band). Medical emergency may be considered but must be documented by a medical professional.

- **Attendance/Participation:** Students are expected to interact with the class regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor about any issues or situations that detract from your semester, so you and the professor can discuss and mitigate the impact of the absence on your attainment of course learning goals.
  Class attendance will be assessed on attendance lists or records of class participation . **You will miss 2 points for each absence** until you reach 50 points for deduction from your total grade.

- **Assessment:** This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course:

Grading Structure

Exam 1	125 pts
Exam 2	125 pts
12 HLS (Hawkes Learning Assignments)	300 pts
8 Excel Case Quizzes	400 pts
Attendance / Participation	50 pts
TOTAL	**1000 points**
extra-credit	up to 24 pts in total for HLS submitted on time (2 ec for each assignment) *tbd* pts for syllabus quiz & SPOT evaluation

Grade Determination: If you achieve the following thresholds, you are guaranteed to receive the letter grade listed next to them:

$$\geq 90\% \rightarrow \text{A}$$

$$\geq 80\% \rightarrow \text{B}$$
$$\geq 70\% \rightarrow \text{C}$$
$$\geq 60\% \rightarrow \text{D}$$
$$< 60\% \rightarrow \text{F}$$

My Coures Learning Mindset

- CAREGIVER RESPONSIBILITIES: I have great respect for students who are balancing their pursuit of education with the responsibilities of caring for children or other family members. If you run into challenges that require you to miss a class, or if your caregiving responsibilities are interfering with your ability to engage in learning, please contact me. There may be some instances of flexibility we can offer to support your learning.
- STAY INFORMED: Access regularly the course material posted on Canvas. If you feel that you are struggling with the material, please contact me.
- COMPLAINTS: I value the many perspectives students bring to our classroom. Please work with me to create a classroom culture of open communication, mutual respect, and inclusion. All discussions should be respectful and civil. If you ever feel like this is not the case, please stop by my office and let me know. We are all learning together.If you wish to register a complaint, you should first discuss your complaint with me. If you wish to carry it further, contact your program director first, and then other instances in the College, but only after first discussing it with me, your instructor.
- EXAMS: Even though exams are stressing, you are perfectly capable of solve them successfully. If you are under extenuating circumstances please reach out to me as soon as possible to receive support. I normally require written requests to fulfill UNT regulations. We can then discuss alternative arrangements.
- LEARNING SUPPORT: I'm here for you. My aim is to facilitate your learning process. Please do not hesitate to ask questions to me, (the professor, Dr. Palao). I will answer to your questions as quick as possible if you email me. Sometimes, similar questions may be raised by some of you, so in those cases I will post an announcement in Canvas to make sure everyone has the information. So, when you ask a generic question, others can benefit from your question. Since we do meet in person in-class questions are critical, because questions are automatically available to everyone in the classroom.
- WITHDRAWING / DROPPING THE COURSE: Keep in mind that if you are considering to withdraw the class, make sure you received all the possible support before. If you still feel necessary to do so, please check the academic calendar for properly withdraw before the scheduled last drop day. If you stop attending class, you should execute the drop procedure since failure to do so will result in a grade of "F" which cannot be changed.

University and College Policies

- STUDENTS WITH DISABILITIES: The University of North Texas complies with the Americans with Disabilities Act (ADA) in making reasonable accommodations for qualified students with disability. If you have an established disability you should register with the

Office for Disability Accommodation (ODA) and receive further instructions. 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.You may also contact ODA by phone at (940) 565-4323.

- DIVERSITY & INCLUSION: As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation so we will work as a class to collaborate in ways that encourage inclusivity. Although disagreements and debates are encouraged, personal attacks are unacceptable. Together, we can ensure a safe and welcoming classroom for all.

- ACADEMIC INTEGRITY: This course adheres to the UNT policy on academic integrity. The policy can be found at `https://vpaa.unt.edu/fs/resources/academic/integrity`. Remember that if you engage in academic dishonesty you will receive a failing grade on the test or assignment, or a failing grade in the course. In addition, the case may be reported to the UNT Dean of Students/Academic Integrity Office, which maintains a database of related violations.
  Students are expected to read `https://policy.unt.edu/policy/06-003` UNT's Student Standards of Academic Integrity with defines academic dishonesty and sets out the consequences of unethical behavior.

- SEXUAL ASSAULT PREVENTION: UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

- DEADLINES: Dates of drop deadlines, final exams, etc., are published in the university catalog and the schedule of classes. Please be sure you keep informed about these dates.

- SPOT: The Student Perceptions of Teaching (SPOT) is a requirement for all organized classes at UNT. This short Web-based survey will be made available to you at the end of the semester/session, 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 SPOT to be an important part of your participation in this class.
- INCOMPLETE GRADE (I): The grade of "I" is not given except for rare and very unusual emergencies, as per University guidelines. An “I” grade cannot be used to substitute your poor performance in class. Do not let that happen and contact me as soon as possible!
- CAMPUS CLOSING: In the event of an official campus closing, please check your UNT e-mail for instructions on how to turn in assignments, how the due dates are modified, etc.

Schedule and weekly learning goals

The description and timelines contained in the syllabus are subject to change at Professor’s discretion based on the group learning’s pace or other events that may impact the current schedule.

It is meant to be a guide and several items are subject to change. Exams may be moved in time & will be announced. I STRONGLY recommend that you adhere to the schedule below. This way, you should progress at a reasonable, sustainable pace. You will also be able to keep up with all the deadlines.

Schedule and weekly learning goals

Main Topic	Week	Dates	Topics & Sub Topics	Due Dates Assignments & Cases
Module 1	Week 1	12 Jan	Introductions Course Syllabus Course Overview	
		14 Jan	Data Classifications	Syllabus Quiz **(18 Jan)**
	Week 2	19 Jan	*No class - MLK Day*	
		21 Jan	Frequency Distributions Graphical Displays of Quantitative Data	**1-HLS** 2.3 Data Classifications **(22 Jan)**
Module 2	Week 3	26 Jan	Measures of Location	
		28 Jan	Measures of Dispersion	**2-HLS** Ch 3 Review **(29 Jan)** **Case 1 Quiz** Pivot Table **(1 Feb)**
	Week 4	2 Feb	Data subsetting	
		4 Feb	Proportions	**3-HLS** 4.1 Measures of location **(5 Feb)**
	Week 5	9 Feb	Measures of Association between two variables	
		11 Feb	Review Numerical Descriptive Statistics	**4-HLS** 4.2 Measures of dispersion **(12 Feb)** **Case 2 Quiz** Frequency Table **(15 Feb)**
Module 3	Week 6	16 Feb	Time Series Components	
		18 Feb	Types of Time Series Time Series Methods	**5-HLS** Ch 4 Review **(19 Feb)** **Case 3 Quiz** View Filter/Subtotal **(22 Feb)**

Schedule and weekly learning goals *(cont.)*

Main Topic	Week	Dates	Topics & Sub Topics	Due Dates Assignments, & Cases
Module 3	Week 7	23 Feb	Simple Moving Average	
		25 Feb	Weighted Moving Average	**6-HLS** Ch 15 Review **(26 Feb)** **Case 4 Quiz** Time Series **(1 Mar)**
Module 4	Week 8	2 Mar	Review Class / Study time	
		4 Mar	**EXAM 1**	
	Week 9	9 Mar 11 Mar	**NO CLASS** Spring Break!	
Module 5	Week 10	16 Mar	Continuous Random Variables	
		18 Mar	The Normal Distribution	**7-HLS** Ch 7 Review **(19 Mar)**
	Week 11	23 Mar	The Standard Normal Distribution	
		25 Mar	Standardizing a Normal Random Variable	**8-HLS** 7.4 Standard Normal Distribution **(26 Mar)** **Case 5 Quiz** Study Application **(29 Mar)**
Module 6	Week 12	30 Mar	Random Samples and Sampling distributions	
		1 Apr	Distribution of Sample Mean	**9-HLS** Ch 8 Review **(2 Apr)**

Schedule and weekly learning goals *(cont.)*

Main Topic	Week	Dates	Sub Topics	Due Dates Assignments, & Cases
Module 6	Week 13	6 Apr	Central Limit Theorem	
		8 Apr	Sampling Methods	**10-HLS** 8.2 Distribution of the Sample Mean and the Central Limit Theorem **(9 Apr)** **Case 6 Quiz** VLOOKUP **(12 Apr)**
Module 7	Week 14	13 Apr	Estimation with Confidence Intervals: Single Sample	
		15 Apr	Estimating the Population Mean, σ known	**11-HLS** 9.1 Estimating the population mean (σ known) **(16 Apr)** **Case 7 Quiz** IF logical op. **(19 Apr)**
	Week 15	20 Apr	Estimation with Confidence Intervals: Single Sample	
		22 Apr	Estimating the Population Mean, σ unknown	**12-HLS** 9.1 Estimating the population mean (σ unknown) **(23 Apr)** **Case 8 Quiz** Statistical Functions **(26 Apr)**
Module 8	Week 16	27 Apr	Review Class / Study Time	
		29 Apr	**EXAM 2**	
	Week 17	6 May	**FINAL EXAM**	