

DSCI 2710.004 – Data Analysis with Spreadsheets, Summer 2017 5W1 - Syllabus

CLASS (DAY/TIME): MTWR 10-11:50am (sec4) BLB 090
F June 9, 10-11:50am, F July 7, 10-11:50am

INSTRUCTOR: **Dr. Nick Evangelopoulos**

OFFICE: BLB 365D. PHONE: (940) 565-3056

OFFICE HRS: MTW 2:00-3:00 pm, or by appointment

E-MAIL (preferred): evangeln@unt.edu

REQUIRED SOFTWARE:

Minitab 17, installed in the College of Business computer lab. As UNT students enrolled in a COB class, you have access to the physical COB computer lab, as well as the virtual lab via VMWare.

Excel, installed in the College of Business computer lab.

Hawkes Learning: Discovering Business Statistics by Nottingham. Note: This software is **required** to complete the assignments that are equivalent to a portion of one take home exam. Your personal access code to the software is required to obtain the lesson certifications, and to take the online WEBTEST quizzes. The software is available online (web access) and available for purchase at www.hawkeslearning.com. **Software access includes the eBook.**

HLS Student Web Platform: <http://www.hawkeslearning.com/>

HLS Web Access: <https://learn.hawkeslearning.com/Portal/>

HLS training video: <http://tv.hawkeslearning.com/Video.htm?PlayerID=2956123671001>

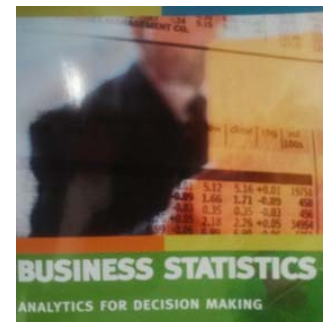
REQUIRED TEXTBOOK (e-book: required; hardbound: optional):

Discovering Business Statistics by Nottingham/Hawkes, Hawkes Learning. Two options are available to you: (1) Hardbound textbook and HLS software bundle: ISBN-13: 978-1-941552-69-8. (2) HLS Software only (includes e-book): ISBN-13: 978-1-941552-85-8. Note that, the textbook is also sold separately (Hardbound textbook only: ISBN-13: 978-1-935782-87-2); However, in this course, only the HLS software and e-book components are required. The *upgrade* to the *hardbound* text, (either by purchasing the software and the hardbound book separately, or by purchasing the hardbound book + HLS software bundle) is optional.



ALTERNATIVE TEXTBOOK:

Business Statistics: Analytics for Decision Making by Kvanli/Pavur/Keeling, CENGAGE. ISBN-13: 978-0495984948. If you already have a hard copy of this book, you may use it for additional reading. Access to its online material will not be required, so you do not need to have an access code for its e-book version.



IF YOU ARE LESS FAMILIAR WITH EXCEL:

Any Excel Primer – Any Excel reference that covers material similar to our BCIS 2610 course.

GOALS: 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 job/career potential of analytics and Decision Sciences;
- 10. Think about becoming a Decision Sciences/Business Analytics Major!**

TEACHING METHOD:

1. You are encouraged to pay attention to commercials and news items in printed 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.
2. 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”.
3. You should **work** on the homework assignments (HLS lessons and Excel/Minitab 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 refer to these assigned exercises.

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/Minitab case studies that require you to use an Excel spreadsheet to analyze and describe real-world business data. By simulating real business problems and requiring you to communicate in writing, using the language of statistics, these evaluation instruments will reinforce the course objectives.

GENERAL COMMENTS

1. 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.
2. You should not hesitate to ask questions in class. Usually someone else has the same question, so, when you ask a question in class, others can benefit from the question.
3. Regular and punctual attendance for the **full** period of each class is expected (irrespective of whether roll calls are made or attendance is otherwise verified). Absences and tardiness are

likely to cause you to miss the presentation of significant material and this may result in a lower grade. The mid-term exams may be missed only if you have a University-approved excuse. Whenever applicable, such an excuse is to be provided to the instructor in writing, as early as possible.

4. 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 POLICIES:

1. **HLS Lessons:** Homework using the **Hawkes Learning Systems: Business Statistics (HLS)** 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 registered onto the HLS Web database by the due date** to receive full credit. If you complete a lesson working offline and using your locally installed version of HLS software, you should **save the HLS certification code to your disk/flash drive and upload it by the due date**. Always double-check that you have received credit by going to your progress report by visiting <http://www.hawkeslearning.com> > Student sign-in.

Late HLS lesson submissions receive only 50% credit, provided they are registered by **the last class day before the final**. No credit is awarded for any HLS lesson completed after the last class day before the final. *If you previously purchased the software and lost your code you should send an Email to HLS customer service at codes@hawkeslearning.com.*

It would be best to send your name as you had registered with HLS originally, the name of the software, the prior term instructor’s name, the term and year of the purchase, and the course for which you made the purchase (e.g. DSCI2710 or MSCI 2710 if you took the course before 2005). You can download (save) instructions on how to get started and use HLS from their web site:

<http://www.hawkeslearning.com/Support/InstallationInstructions.htm>. There is a full set of student directions that walk through the product completely on that page. See page 9 of this syllabus for a full set of HLS instructions.

2. **Excel/Minitab Cases:** Projects involving the use of **Excel** or **Minitab** to analyze business data are assigned. These are an important part of the course grade. For each case assignment, a data set will be provided. Two case assignments will use Excel and two more will use Minitab. Step-by-step instructions will be provided. For each one of these case assignments, your typed report should be uploaded on Blackboard. **Late report submissions are accepted at a 50% penalty.**
3. **Exams:** There will be three exams plus a comprehensive final exam. All exams will be closed book. The lowest grade of Exams 1, 2, and 3, will be dropped. For each exam, bring a formula sheet, calculator, any tables that apply and your Student ID.
4. **Grading:** The 20 HLS modules are worth a total of 200 points (@ 10 points each); The 4 Excel & Minitab case assignments are worth a total of 100 points (@25 pts. each); The three in-class mid-term exams are worth a total of 300 points (@150 each, with the lowest grade of the three dropped), and the departmental comprehensive final is worth 200 points.

Course Point Allocation:

Exam #1	150
Exam #2	150
Exam #3	150
(Lowest of exams #1, #2, #3 will be dropped)	-150
Final exam (cumulative)	200
HLS Lessons (Hawkes Learning)	200 (10 points each)
Excel & Minitab case assignments	<u>100</u> (25 points each)
TOTAL	800

- Letter Grades:**
 - $\geq 90\% = A \geq 720$ points
 - $\geq 80\% = B \geq 640$ points
 - $\geq 70\% = C \geq 560$ points
 - $\geq 60\% = D \geq 480$ points
 - Below 60% = F < 480 points
- Extra Credit:** Extra credit assignments are announced in class. They are intended to provide a bonus opportunity for the students that attend class. Email instructions or makeup opportunities for these assignments are not available.
- Tutoring Lab (BLB 131).** This is available for students seeking additional help. Hours and venue will be announced in class. The purpose of the lab is to assist students to overcome difficulties with statistics problems. It is not meant to be an extensive tutoring service. Hours will be announced in class and/or posted on the course website & on Blackboard.

DEPARTMENT, COLLEGE, and OTHER POLICIES

- COMPLAINTS:** If you wish to register a complaint, you should first discuss your complaint with your instructor. If you wish to carry it further, contact Dr. Nick Evangelopoulos (the course coordinator) and then the ITDS Department Chair Dr. Mary Jones, but **only after first discussing it with your instructor**.
- EXAMS:** You are required to take all exams, unless a written medical or other UNT-approved excuse is provided. In that case, you should discuss the alternative arrangements with your instructor. Please have a picture ID in your possession when taking all exams. As a general rule, the course format requires **no make-up exam** be given.
- ACADEMIC INTEGRITY:** This course adheres to the UNT policy on academic integrity. The policy can be found at <http://vpaa.unt.edu/academic-integrity.htm>. 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 referred to the Dean of Students for appropriate disciplinary action.
- STUDENTS WITH DISABILITIES:** The College of Business complies with the **Americans with Disabilities Act** in making reasonable accommodations for qualified students with disability. If you have an established disability as defined in the "Act" and would like to request accommodation, please see your instructor as soon as possible.
- 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.

7. CELL PHONES: As a courtesy to your instructor and to your fellow classmates, you are asked to set your cell phone to vibrate, or switch it off. In case of a personal emergency, if you must use your cell phone, you are asked to step out of the classroom.
8. 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. If you think you will not be able to complete the class, please drop the course.
9. CAMPUS CLOSING: In the event of an official campus closing, please check your UNT e-mail (EagleConnect) for instructions on how to turn in assignments, how the due dates are modified, etc.
10. COURSE DISMISSAL:

A student can be dismissed from the course with a grade of "WF" for reasons of unsatisfactory progress. Some grounds for unsatisfactory progress are as follows:

- i. The student has more than 10 missed assignments (such as Excel or HLS) without justification.
- ii. The student misses (providing no reason)/ or is caught cheating on an examination.

If a student is suspected of unsatisfactory progress, the instructor will first issue a warning (oral) to the student. Upon issuance of the warning, the student has three (3) actual days to provide evidence supportive of the student's position. For any missed exam the following evidence will be accepted as tenable excuse: (*) Written and valid doctor's excuse for illness, (*) Inability to reach class due to inclement weather (i.e. ice and/or snow, flooding, etc.), or (*) Valid UNT sponsored event (must provide signed reference from head of sponsoring department.) If the student provides satisfactory evidence, the instructor will reinstate him or her into the class.

The syllabus on the next page is a tentative outline for the semester. It is meant to be a guide and several items are subject to change.

DSCI 2710 – Topics (HLS# refer to **Hawkes Learning Systems** lessons)

<u>DATE</u>	<u>TOPICS</u>	<u>HLS Assignment covered</u>
Week 1 (Jun 5 – Jun 9)		(Dates assignments are covered in class; due dates are listed in HLS)
	Course policies	HLS: obtain authorization code
	Introduction to Statistics	
	Levels of measurement	HLS 2.5-2.6
	Graphical displays: pie charts, bar graphs	HLS 3.3
	Graphical displays: histograms, line graphs, stem-and-leaf	HLS 3.5-3.9
	Measures of location	HLS 4.1
	Measures of dispersion	HLS 4.2a
	Constructing samples	HLS 4.2b
	Overview of Case 1 (Excel)	
	No class on Friday, Jun 9 (extra time for HLS & Case 1)	

<u>DATE</u>	<u>TOPICS</u>	<u>HLS Assignment covered</u>
Week 2 (Jun 12 – Jun 15)		
Jun 12	Review for Exam 1	
Jun 13	**** Exam 1 ***	
	Classical probability	HLS 5.1
	Discrete random variables	HLS 6.1-6.3
	The Binomial distribution (word problems)	HLS 6.5
	Introduction to Time Series	
	Overview of Case 2 (Minitab)	
Week 3 (Jun 19 – Jun 22)		
	The Poisson distribution	HLS 6.6
	Reading a normal curve (z) table	HLS 7.3a
	The normal distribution	HLS 7.3b
	Finding the value of z	HLS 7.3c
	Overview of Case 3 (Excel)	
Jun 21	Review for Exam 2	
Jun 22	**** Exam 2 ***	
Week 4 (Jun 26 – Jun 29)		
	Sampling distributions: means	HLS 8.3
	Estimating means: sigma known	HLS 9.1-9.3
	Estimating means: sigma unknown	HLS 9.4b
	Statistical quality control: monitoring with an R chart	HLS 17.3b
	Monitoring with an X-bar chart	HLS 17.3a
	Overview of Case 4 (Minitab)	
Jun 28	Review for Exam 3	
Jun 29	**** Exam 3 ***	
Week 5 (Jul 3 – Jul 7)		
Jul 3	p-charts	HLS 17.4
	c-charts	HLS A.14
Jul 4	No class on Tuesday, Jul 4 (Independence Day)	
Jul 5	Review for the Final Exam	
Jul 6	No class on Thursday, Jul 6 (extra study time)	
Jul 7	*** COMPREHENSIVE FINAL EXAM: Friday, Jul 7, regular classroom/time ***	
	Note: At UNT, during the Summer Sessions, Final Exams take place on a Friday , even though classes meet M-Th.	

HLS Student Getting Started Directions

TO GET THE ACCESS CODE FOR YOUR COURSE:

1. Go to <http://www.hawkeslearning.com/Support/GetYourAccessCode.htm>. Phone HLS at 843-571-2825 for help
2. There will be three options on the above link and each option is explained clearly.
3. Choose the appropriate option that is applicable to you (for example “Purchase an access code”)
4. If you are purchasing the access code anew, you will be taken to a secure site, where you will be asked to enter your credit card information. Please note that the address information **MUST** match the billing address of the credit card.
5. After your credit card information has been verified, you will be taken to a page where you will request an Access Code by entering your name, school, and email address.

Upon submitting the Access Code request, your Access Code will be emailed to you as well as displayed on the screen.

TO ENTER THE SOFTWARE AND SAVE YOUR ACCESS CODE:

1. Double-click on the purple diamond icon on your Desktop (or go to Start, Programs, Hawkes Learning Systems).
2. Enter your access code when prompted. You may type it, paste it, or load it from a disk (if you saved it from e-mail) by clicking the “F1-Load From Disk” option and browsing to the path where you saved it. If you type or paste your access code, you will be prompted to save it. Save your access code to a flash drive or another option to avoid typing it each time.

TO ENROLL IN YOUR INSTRUCTOR’S GRADEBOOK:

1. **If you have internet access** and have entered your **Hawkes Course ID** (which is [UNTDDBS](#)), you will automatically be asked to enroll in your instructor’s gradebook the first time that you log in to the software. Choose your instructor’s name and the correct section from the pull-down menus.
2. **If you do not have internet access** on the computer where the software is installed, you will need to enroll in your instructor’s gradebook by going to www.hawkeslearning.com/UNTDDBS. After entering your Access Code, you will be prompted to choose your instructor’s name and the correct section from the pull-down menus.

TO CERTIFY (DO YOUR ASSIGNMENT IN THE SOFTWARE):

1. The **Certify** option is where you will complete your assignment.
2. After certifying, you will be given a certification code (this verifies that you completed your assignment). It is recommended that you print and/or save your certification code.
3. **a. If you have internet access**, you should receive a message that says your certificate has been submitted in your instructor’s gradebook. You are now done with that assignment! If you do not receive this message, follow the directions under “**b.**”
b. If you do not have internet access, you will need to save the certification code file to a disk and upload the saved file from your disk on the internet from campus to get credit for your assignment in your instructor’s gradebook. To do this,
 - go to <https://course.hawkeslearning.com/UNTDDBS/Default.asp> and **log in using your access code**
 - click the [Submit Certificate\(s\)](#) link
 - select the Lesson Name from the drop down list. Load your certification code from a disk and click OK. Your certification code is now submitted!
 - you need to perform these steps after you Certify to get credit for each of your assignments

* **Be sure you submit your Certification Code ON or BEFORE the due date to get full credit for the assignment.**

HLS Lesson Due dates: Module registration due by 11:59pm CT on the WEB registration system. Late submissions carry a 50% penalty. No submissions are accepted after Thursday, July 6.

<u>No.</u>	<u>Lesson</u>	<u>Due Dates are listed in your HLS Progress Report</u>	
1	2.5	Levels of measurement	6/9
2	3.3	Graphical displays: pie charts, bar graphs	6/9
3	3.5	Graphical displays: line graphs, histograms, stem-and-leaf	6/9
4	4.1	Measures of location	6/11
5	4.2a	Measures of dispersion	6/11
6	4.2b	Constructing samples	6/11
7	5.1	Classical probability	6/18
8	6.1	Discrete random variables	6/18
9	6.5	The Binomial distribution (word problems)	6/18
10	6.6	The Poisson distribution	6/21
11	7.3a	Reading a normal curve (z) table	6/21
12	7.3b	The normal distribution	6/25
13	7.3c	Finding the value of z	6/25
14	8.3	Sampling distributions: means	7/28
15	9.1	Estimating means: sigma known	7/28
16	9.4b	Estimating means: sigma unknown	7/28
17	17.3b	Statistical quality control: Monitoring with an R chart	7/2
18	17.3a	Mean charts using range: Monitoring with an x-bar chart	7/2
19	17.4	p-charts	7/6
20	A.14	c-charts	7/6

Case Assignments: Upload a typed report to Blackboard. Late submissions carry a 50% late penalty. Case details are posted on the course Blackboard site.

<u>No</u>	<u>Topic</u>	<u>Due Date</u>
CASE 1 (Excel)	Graphical displays	6/12
CASE 2 (Minitab)	Time Series models	6/20
CASE 3 (Excel)	Warranty calculation	6/27
CASE 4 (Minitab)	Quality Control	7/5

Exams:		
Exam 1 (regular classroom)		6/13 (Tuesday)
Exam 2 (regular classroom)		6/22 (Thursday)
Exam 3 (regular classroom)		6/29 (Thursday)
Final Exam (regular classroom)		7/7 (Friday)

Summer session overview:

	M	T	W	R	F	Sa	Su
Week 1	5	6	7	8	9	10	11
Week 2	(12)	(13)	14	15	16	17	18
Week 3	19	20	(21)	(22)	23	24	25
Week 4	26	27	(28)	(29)	30	1	2
Week 5	3	4	(5)	6	(7)		

○ =Exam

○ (dashed) =Exam review

■ (grey) =No Class

□ (white) =Case Due