

DSCI 3710.090 – Summer 2013 – Syllabus

CLASS day & time: TR 6:00 – 9:50 pm, Founders (Dallas Building 2) room 101
INSTRUCTOR: Daniel Friesen, Ph.D.
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OFFICE HRS: TR 2-5 pm; M noon – 4 pm.

REQUIRED BOOKS & SOFTWARE:

1. Use your textbook from DSCI 2710 - **Business Statistics: Analytics for Decision Making**, by Kanli, Pavur, & Keeling, Cengage Learning, 2010 ISBN-13: 978-1-111-40020-0.
2. **Hawkes Learning Systems: Business Statistics**, by James S. Hawkes, *Hawkes Learning Systems (HLS)*, *FALL 2012 Version or newer*. Note: This software is **required**. **If you have already purchased an earlier version of the HLS software for DSCI 2710 or DSCI 3710, you do NOT need to purchase new HLS software. You can use the same access code and update the software via the update option within your software.** Individual copies of the software are required to obtain the module certifications, and to take the online WEBTEST quizzes. See the **Student Getting Started Directions** page at the end of this syllabus.
3. **Optional Book:** Any Excel Primer - Most of you had an Excel reference in BCIS 2610 that will suffice.

GOALS: At the end of the course, students will

1. increase your appreciation for the use of statistics in business decision making,
2. acquire a positive attitude toward business statistics and how it is relevant for your future coursework,
3. be better able to communicate in the language of applied business statistics,
4. be better able to select the appropriate statistical tool/methodology to aid in business decision making for your future course work and future job,
5. be able to use appropriate statistical formulae to solve problems,
6. be more capable of using a computer to describe and analyze numerical data,
7. enhance your ability to use quantitative methods for business decision making.

TEACHING METHOD:

1. Students are encouraged to pay attention to commercials and news items to become aware of the wide use of statistics in our daily lives. To better assist students in understanding the use of these methodologies in business, many of the class problems will be presented as simple business cases.
2. Students will observe and participate in the working of problems found in the textbook. In addition, students will be required to complete modules in **Hawkes Learning Systems (HLS): Business Statistics**. This process is intended to help students make more efficient use of their time in solving, and in learning how to solve, problems.
3. Students are invited to participate in class discussions on statistical methodologies applied to non-trivial cases in various areas of business. The use of spreadsheets in analyzing business data will be stressed.
4. Students are required to complete tutorial assignments and computer projects.

EVALUATION:

To demonstrate their ability to use quantitative techniques in business, students will complete the modules (**Hawkes Learning Systems: Business Statistics**), analyze real business data for class cases using Excel

and answer exam questions based on short data analysis situations. Wherever possible, rather than being purely numerical, problems will be presented in a verbal narrative format. The exams and assigned work reinforce the course objectives by simulating real business problems that require students to communicate.

CAMPUS CLOSING POLICY: In the event of an official campus closing, please check your UNT e-mail account (EagleConnect) or the HLS notice system for instructions about how to turn in various assignments, how the due dates are modified, etc.

GENERAL COMMENTS

1. **Doing the assignments is essential for success in this course.** In fact, the assignments constitute a significant portion of your grade in this course. Students are encouraged to keep up with the homework and meet the submission deadlines.
2. Do not hesitate to ask questions in class. Usually someone else has the same question, so, by asking in class everyone can benefit from the question.
3. Regular and punctual attendance for the **full** period of each class is expected. 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 exam or the quizzes may be missed only if you have a University-approved excuse. Such an excuse is to be provided to the instructor in writing, as early as possible.
4. Students have the final responsibility for seeing that they properly withdraw before the scheduled last drop day, in case they wish to withdraw from the course. A student who stops attending class should execute the drop procedure; failure to do so will result in a grade of “F” which cannot be changed.
5. Students are requested ***not*** to phone the ITDS department—or anyone else—for their final grade in the course. Final grades are available only electronically, via MyUNT and via Hawkes.

DSCI 3710 COURSE POLICIES:

1. **Homework:** Homework is assigned and should be completed when due. While only the HLS modules (modules), WEBTESTS and Quizzes on Excel cases are graded, **you are expected to read** and understand the relevant sections of the textbook. **All reading material is testable**, even if it is not emphasized in the lecture.
2. **Excel Cases:** Projects involving the use of **Excel** to analyze business data are assigned. These are an important part of the course grade that is graded via an online **Quiz** that is available in the HLS software using WEBTEST.
Taking Online Excel Quizzes: To take a quiz in HLS, open the software as usual and select Web Test at the bottom of the page. This will open the Web Test area. Select Take Test on the left side of the page. When a new window opens, select Assigned Test and OK. From the Select a Test Menu you can select the appropriate Excel Quiz, Practice HLS Quiz, or Online HLS Quiz. These Quizzes will not open until the dates as posted in the progress report or as announced in class. Once you select the Begin Test button the clock is running for the assigned time allotted for the Quiz. If you log off before completing the Quiz/Exam, you will receive either a -0- or partial credit for what portion you did complete. Therefore get everything you need BEFORE opening the Quiz.
3. **Tutorial Exercises:** Tutorial exercises using the **Hawkes Learning Systems: Business Statistics (HLS)** are assigned. These form a significant part of the course grade and **must be registered in**

the **HLS Web database** to receive full credit. On completion of a module, you should **save the HLS certification code to your disk**. If you are connected to the internet, the module will register automatically but check that you have received credit by going to your progress report. If there is any problem, exit HLS and then go to your course HLS Web site at <http://www.hawkeslearning.com/UNTDBSTAT/>, also accessible through the COBA link: <http://www.coba.unt.edu/itds/courses/dsci3710/dsci3710.htm> (successive clicks through COBA Web site > Departments > ITDS > Course Descriptions > Go to DSCI3710 and select Course Website >).

No credit is awarded for any exercise completed after 7/5 midnight. To get your authorization code for using the HLS software, if you are a new purchaser of the software, you will need to visit HLS web site at <http://www.hawkeslearning.com/webcodeform/makacode.asp>. 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 originally used, 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 (DSCI2710 or DSCI3710). See the attached sheet for a full set of HLS instructions.

4. **Exams:** There is one in-class mid-term exam worth 200 points and a **comprehensive final** worth 200 points. No make-up exams are given; however, if a student misses the first in-class exam with an appropriate University approved excuse (as mentioned above), the final will be used to substitute for the missed exam (as well as for the final exam). For each exam you will be allowed to use formula sheets, notes, textbooks, a hand-held calculator, and Tables.
5. **Grading:** The 16 HLS modules are worth a total of 160 points (@ 10 points each); The 4 online Excel case quizzes are worth a total of 40 points (@10 pts. each); The in-class mid-term exam is worth 200 points, and the comprehensive final is worth 200 points.

Point Allocation:

Mid-term Exam	200
HLS Tutorials and Excel Quizzes (16*10 pts + 4*10 pts)	200
Final Exam (comprehensive)	<u>200</u>
TOTAL:	600

Letter Grades:	540+ = A	480+ = B	
	420+ = C	360+ = D	Below 360 = F

6. To be eligible for enrollment in upper-level business courses, students must have satisfied **all** of the following requirements:
- A 2.70 grade point average
 - Completion of 45 hours of the pre-business course work,
 - Completion of **DSCI 2710** or equivalent such as **MSCI 2710** or MSCI 3700 with a grade of C or better. In addition, students are required to have completed:
Accounting 2020 and 2030 with grade "C" or better
Economics 1100

If you are a business major (including business undecided or pre-accounting majors) enrolled in upper-level business courses and do not meet these requirements, please drop the upper-level courses immediately in order to receive a refund of your tuition.

7. 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. J. Wong, but **only after discussing it with me.**
8. As a general rule, the course format requires **no make-up exam** be given. The grade of "I" is not given except for rare and very unusual emergencies, as per University guidelines. If a student misses the final exam, he or she must provide an acceptable excuse. If the excuse is acceptable, the instructor will submit an "I" for the final grade and the student must make up the exam within the first two (2) weeks of the following term. **This is the only circumstance in which an "I" grade will be awarded. If you think you will not be able to complete the class satisfactorily, please drop the course. An "I" grade cannot be used to substitute for poor performance in class.** If a student is caught cheating, he or she will be immediately removed from the class with a "WF" grade. To be reinstated, the student must provide substantial evidence to the contrary in a hearing held with the Director of Student Life.
9. Code of Conduct and Ethics: The policies for this course are consistent with those in the University of North Texas Student Guidebook. You are responsible for familiarizing yourself with such information published by the University.
10. **Students with Disabilities:** The College of Business Administration 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 or visit the Office of Student Life as soon as possible.
11. 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 (and any change thereof).

The Topics list is a tentative outline for the semester. It is meant to be a guide and several items are subject to change. Exams and quizzes may be moved to better accommodate any changes in class pace. Certain topics may be stressed more or less than indicated.

DSCI 3710 – Topics

HLS – HLS: Business Statistics tutorials (In the listing below HT stands for “Hypothesis Testing”).

<u>DATE</u>	<u>TOPICS</u>	<u>SECTIONS</u>	<u>ASSIGNMENTS</u>
6/4 (T)	Course policies		
	Hypothesis testing for population mean - large samples. Exclude HLS: Obtain authorization code calculations of power and beta; concepts only	10.1	#10.1, 4, 5, 7, 8, 9
	One-tailed test for μ with known sigma	10.2	#10.19, 20, 22 HLS1: 9.5 HT means (Z-value)
6/6 (R)	Use of p-values	10.3	#10.28, 32
	Hypothesis tests for population mean - Unknown sigma, introduction to t-tables	10.4	#10.37, 38, 40, 41, 43, 53, 54 HLS2: 9.6 HT mean (t-value) HLS3: 9.4 HT means (p-value)
	C.I. & hypothesis test for two populations means - large independent samples.	11.1-11.2	#11.3, 9, 10, 13, 15 HLS4:10.2 HT 2 means (σ known) Download Excel 1 Assignment
6/11 (T)	C.I. & hypothesis test for two populations means - small independent samples. Exclude hand calculation for DF with unequal variance case	11.3	#11.25, 26 HLS5: 10.3 HT 2 means (σ – unknown)
	Paired (dependent) small samples from two populations.	11.5	#11.47, 48, 49, 51 HLS6: 10.4 Compare μ's (dep. n) Download Excel 2 Assignment
	One-way analysis of variance. Exclude calculations for test for equality of variance and hand calculation for Tukey test	11.6	#11.57, 58, 60 HLS 7: 12.1 ANOVA
	C.I. for population proportion: large samples only . Determination of sample size	12.1	#12.7, 8, 9 CASE 2: One-way ANOVA
	CASE 1: Comparing population Means - Excel Quiz 1 (Multicultural / International Finance)		

6/13 (R)	Hypothesis test for population proportion: Large samples	12.1	HLS 8: 9.3 HT proportions (Z)
	Hypothesis test for population proportion: large samples only continued	12.2	#12.17, 26, 27 HLS 9: 9.2 HT prop. (p-value)
	Comparing two population props. - large independent samples.	12.3	#12.31, 34, 37 HLS 10:10.1 HT 2 proportions
	Chi-Square test for independence/homogeneity Exclude pooling of contingencies Chi-Square test: p-values using chi-square tables	12.4	#12.49, 64 #12.65 HLS 11: 9.10 Chi-sq. test for association
CASE 2: 1-Way ANOVA (Marketing / Management)			
6/18 (T)	Test 1: Review Test 1: chapters 10-12.		Download Excel 3 Assignment
6/ 20 (R)	Bi-variate data & correlation Covariance & Least Squares Line	13.1	#13.2, 3, 4, 5 #13.6, 7 HLS12: 11.1 Scatter Plots & Corr
	Simple linear regression, model assumptions, meaning of s^2	13.2	#13.18, 19 HLS13: 11.2 Fit linear model CASE 3: Chi-Square test Excel Quiz 3 (Marketing)
	Simple linear regression: hypothesis test and C.I. for slope	13.3	#13.23, 24, 25
	Coefficient of determination, danger of assuming causality. Exclude t-test for rho	13.4	#13.33, 37 HSL 14: 11.3 Regression analy. I
CASE 3: Chi-Square Test (Marketing)			
6/25 (T)	Estimation/Prediction	13.5	#13.45, 53
	Residual analysis	13.6	#13.66
	Multiple regression: using Excel	14.1	#14.1, 2, 6 HSL 15: 11.4 Mult regression HSL 16: 11.5 ANOVA regression
	Global F- test vs individual t-tests	14.2	#14.13, 15, 17
	Multicollinearity	14.3	#14.31, 32, 33

6/27 (R) Dummy variables. 14.4 #14.39, 42, 49
 Multiple regression **using Excel**
 Further residual analysis
 Multiple Regression Cases and Examples

CASE 4: (Real-Estate)

7/2 (T) Catch-up and review
CASE 4: Multiple Regression (Real Estate)

7/5 (F) FINAL (Comprehensive)

The **Comprehensive** Final Exam for DSCI3710 will be held at the **time** that class meets.

Assignment Due dates: Online registration due dates for the HLS: Business Statistics (HLS) Modules

Registrations due by 11:59 p.m. on 7/5 (but earlier is better): 16 x 5 pts. = 80 pts.

<u>No.</u>	<u>Module</u>	
1	9.5	Hyp. test for μ (Z-value)
2	9.6	Hyp. test for mean (t-value) – Experiential in class exercise associated with lesson
3	9.4	Hyp. test for μ (p-value)
4	10.2	Comparing two means (sigma known)
5	10.3	Comparing two means (sigma unknown)
6	10.4	Comparing means (dependant)
7	12.1	ANOVA
8	9.3	Hyp. test for proportions (Z-value)
9	9.2	Hypothesis test for proportions (p-value)
10	10.1	Comparing 2 proportions (large independent samples)
11	9.10	Chi-sq. test for association
12	11.1	Scatter plots and Correlation
13	11.2	Fit linear model
14	11.3	Regression analysis I
15	11.4	Multiple Regression
16	11.5	ANOVA regression

After completing a module in a campus lab or done at home you should save the HLS certification code to your disk.
No modules are taken after 7/5/2012.

Quizzes: Printed analysis results are required for completion of online quiz on each Excel case. Your grade on the Excel case is based on the quiz: 4 x 10 pts. = 40 pts.

<u>No</u>	<u>Date</u>	<u>Topic</u>
Excel CASE 1	7/5	Comparing population Means (Multicultural and International Finance)
Excel CASE 2	7/5	1 way ANOVA (Marketing/ Management)
Excel CASE 3	7/5	Chi-Square test (Marketing)
Excel CASE 4	7/5	Multiple Regression (Real-Estate)

Excel case details are available through the Excel page on our course Web site at
<http://www.coba.unt.edu/itds/courses/dsci3710/>

[OR: COBA Web site > Departments > ITDS > Courses > DSCI Undergraduate > DSCI3710]

Each excel case is evaluated using a short quiz based on it, given using WEBTEST on the due date. The quiz contains 5 questions (5 points) and students need to use their own analysis printout to answer the questions. Make-up quizzes are only given if arranged with your instructor.

Student Getting Started Directions – see <http://www.hawkeslearning.com/> for help

TO PURCHASE THE SOFTWARE (an Access Code) FOR YOUR COURSE:

1. Go to www.hawkeslearning.com and click on **get your access code**. Phone HLS at 843-571-2825 for help
2. Under the heading, I do not have a License Number, click the link to [purchase an Access Code online](#).
3. Choose the product you need from the dropdown list.
4. Choose pay with Credit Card.
5. 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.
6. 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 DOWNLOAD and INSTALL THE HLS SOFTWARE AT HOME: use the update option instead if you have a version from a prior term

1. Go to the HLS site and select the [Downloads Page](#) from the list on the left
2. Select Business Statistics product from the drop down list.
3. Click on the Full Install download option.
4. When prompted, save the Installer program to your Desktop folder.
5. After the file is saved to your desktop, double click on it to begin the installation. Please follow the prompts.
6. When prompted for the Course ID enter [UNTDBSTAT](#) in the box provided.
-If you do not have internet access, select the option that says “No, I will not be accessing an online progress report from this computer.”
7. If you prefer, HLS can send you new CDs. There is a \$5.00 shipping and handling cost. These disks do NOT include a license number or Access Code you will have to purchase those separately. To purchase the CDs for installation purposes go to <http://hawkespublishing.stores.yahoo.net/cdsonly.html>

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 “FI-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 floppy disk 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 Course ID (which is [UNTDBSTAT](#)), 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/UNTDBSTAT. 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 www.hawkeslearning.com/UNTDBSTAT 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