DSCI 3710-090 Syllabus: Fall 2013

CLASS (DAY/TIME): Wednesday 7:00 – 9:50 pm in Room 101, Founders Hall (Dal #2)
INSTRUCTOR: Daniel D. Friesen
OFFICE: Founders 236   **PHONE:** 972.338.1805
E-MAIL: dfriesen@unt.edu
OFFICE HRS: M: 3 - 4 p, T: 1 – 6 p, W: 3 - 6 p; MW: 11 am – 1 pm; And by appt.

1. **Textbook**
   Business Statistics: Courseware Edition, by Kvanli, Pavur, and Keeling. Published by Thomson Learning / Cengage Learning, ISBN : 9780495984948.

2. *Hawkes Learning Systems: Business Statistics*, by James S. Hawkes, *Hawkes Learning Systems* (HLS)*,* latest version. Note: This software is **required** to complete the assignments that are equivalent to a portion of one take home exam. **If you have already purchased an earlier version of it for DSCI 2710 or DSCI 3710, you can use the same access code. In such case, you do _not_ need to purchase new HLS software**.

3. Optional Books:
   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. have an increased appreciation for the use of statistics in business decision making and understand how it is relevant for your future coursework and profession,
2. be better able to communicate in the language of applied business statistics,
3. be better able to select the appropriate statistical tool / methodology to aid in business decision making for your future course work and future profession,
4. be able to use appropriate statistical formulae to solve problems,
5. be more capable of using a computer to describe and analyze numerical data,
6. enhance your ability to use quantitative methods for business decision making.

TEACHING METHOD:
1. 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 actively 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 learning how to solve problems.
3. Students are required 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 tutorials (**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 written form. The exams and assigned work reinforce the course objectives by simulating real business problems that require students to communicate.

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. I encourage you to keep up with the homework and meet the submission deadlines.

2. This is a challenging class due to the wide range of topics covered. Please allocate time appropriate to your goals for this course. Students should 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 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. Whenever applicable, such an excuse is to be provided to the instructor in writing, as early as possible.

4. In case they wish to withdraw from/ drop the course, students have the final responsibility for seeing that they properly withdraw before the scheduled last drop day. A student who stops attending class should execute the drop procedure since failure to do so will result in a grade of "F" which cannot be changed.

5. Students are requested not to phone ANYONE to obtain their final grade in the course. Final grades are only available electronically.

DSCI 3710 COURSE- SPECIFIC POLICIES:
1. **Homework:** Homework is assigned and should be completed when due. While only the HLS tutorials (modules) 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 on the dates they are due.

3. **HLS Tutorial Exercises (module certifications):** Tutorial exercises using the **Hawkes Learning Systems (HLS): Business Statistics** are assigned. The due dates for the tutorials using **HLS** software are assigned in this syllabus. These form a significant part of the course. On completion of a module in a school lab, or at home, 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 tutorial exercise completed after the last class day 12/12/2013.

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 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 (DSCI2710 or DSCI3710 - formerly MSCI2710 or MSCI3710). See the attached sheet for a full set of HLS instructions.

4.   **Exams:** There is 1 in-class mid-term exam worth 200 points and 1 comprehensive final exam worth 200 points. If a student misses the first in-class exam (with an appropriate University approved excuse, as mentioned above) the final can 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, any calculator, and Tables (please provide your own individual copies of these items).

Taking Online Excel and HLS Quizzes: To take a quiz in HLS, open the software as usual and select "WebTest" 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 posted in the progress report. 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 assemble everything you need BEFORE opening the Quiz.

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 points 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*10pts)	200
Final Exam	200
TOTAL:	600

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

DIVISION and UNIVERSITY POLICIES

1. To be eligible for enrollment in upper-level business courses, students must have satisfied **all** of the following requirements:
    a) A 2.70 grade point average
    b) Completion of 45 hours of the pre-business course work,
    c) 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, and Economics 1100

    If you are a business major (including business undecided or pre-accounting majors) who is 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. If you choose not to drop, the Dean's office will administratively cancel your enrollment in those courses. In that event, you will **not** receive a tuition refund.

2. 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. John Wong (Associate Dean of the Business and Public Leadership Division).

3. The grade of "I" is not given except for rare and very unusual emergencies, as per University guidelines.

4. You are required to take all exams, unless a written medical excuse is provided. In that case, you should discuss the alternative arrangements with your instructor.

5. 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. All tests will contain the following statement to which you must agree: *On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.*

6. 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 as soon as possible. Office hours and phone number are shown at the top of this syllabus.

7. 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).

8. **Grounds for Dismissal from the Course**

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 3 unexcused assignment returns (such as Excel or HLS, on their final due dates) / absences.

ii. The student misses an examination (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) days to provide evidence supportive of the student's position. For any missed exam, the following evidence will be accepted as a tenable excuse:

o Written and valid doctor's excuse for illness,
o Inability to reach class due to inclement weather (i.e. ice and/or snow, flooding, etc.),
o 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.

If a student misses the final exam, he or she must provide the information stipulated above. 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. If you think you will not be able to complete the class satisfactorily, please drop the course. An "I" grade cannot be used as a 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 as coordinated by the Office of Student Life.

The syllabus is a tentative outline for the semester. It is meant to be a guide and 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.) Reading assignments (sections) as well as Class Work (CW) & Home Work (HW) refer to **the new online textbook but you can get the same material in the older textbook by subtracting two from the chapter numbers listed below**. For example, chapter 10 below is 8 in the older textbook.

DAY	TOPICS	SECTIONS	CW, HW & ASSIGNM'TS
August 28	Course policies Hypothesis testing for population mean - large samples. **Exclude calculations of power and beta; concepts only**	10.1	#10.1, 4, 5, 7, 8, 9 **HLS: Obtain authorization code**
September 4	One-tailed test for μ with large n	10.2	#10.19, 20, 22 **HLS1: 9.5 HT means (Z-value)**
	Use of p-values	10.3	#10.28, 32

DAY	TOPICS	SECTIONS	CW, HW & ASSIGNMENTS
September 11	Hypothesis tests for population mean - small n, 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 population means - large independent samples.	11.1-11.2	#11.3, 9, 10, 13, 15 **HLS4:10.2 HT 2 means (σ known)**
September 18	C.I. & hypothesis test for two populations means - small independent samples. **Exclude hand calculations with unequal variance case**	11.3	#11.25, 26 **HLS5: 10.3 HT 2 means (σ – unknown)** **Download Excel 1 Assignment**
	Paired (dependent) small samples from two populations.	11.5	#11.47, 48, 49, 51 **HLS6: 10.4 Compare μ's (dep)**
September 25	F-test for two variances **right tailed tests- concept only**	11.4	#11.37, 38 **Download Excel 2 Assignment** **CASE 1: Comparing population Means** - **Excel Quiz 1 (Finance)**
	One-way analysis of variance. **Exclude test for equality of variance**	11.6	#11.57, 58, 60 **HLS 7: 12.1 ANOVA**
October 2	C.I. for population proportion: **large samples only**. Determination of sample size	12.1	#12.7, 8, 9 **CASE 2: One-way ANOVA**
	Hypothesis test for population proportion: **large samples only**.	12.2	#12.17, 26, 27 **HLS 8: 9.3 HT proportions (Z)** **HLS 9: 9.2 HT prop. (p-value)***
October 9	Comparing two population props. - large independent samples.	12.3	#12.31, 34, 37 **HLS 10:10.1 HT 2 proportions**
	Catch up and Review		
October 16	Catch up and Review ********* EXAM 1 (chapters 10-12)********		**Download Excel 3 Assignment**

DAY	TOPICS	SECTIONS	CW, HW & ASSIGNMENTS
October 23	Chi-Square test for independence/homogeneity **Exclude pooling of contingencies**	12.4	#12.49, 64
	Chi-Square test: p-values using chi-square tables		#12.65 **HLS 11: 9.10 Chi-sq. test for association**
October 30	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)**
November 6	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
	Estimation/Prediction	13.5	#13.45, 53
	Residual analysis	13.6	#13.66 **HSL 14: 11.3 Regression anal. I**
November 13	Multiple regression:	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 **Download Excel 4 Assignment**
	Multicollinearity	14.3	#14.31, 32, 33
November 20	Dummy variables. Multiple regression **using Excel**	14.4	#14.39, 42, 49
	Step-wise Procedures, further residual analysis	14.4	

DAY	TOPICS	SECTIONS	CW, HW & ASSIGNMENTS

November 27   Multiple Regression Cases and Examples
Catch-up and review

**CASE 4: Multiple Regression -
Excel Quiz 4 (Real-Estate)**

December 4   Final Exam Review

December 11   **The Comprehensive Final Exam for DSCI3710-090 will be held on**
<mark>**Wednesday**</mark>, <mark>**December 11**</mark>,
<mark>**from 7:00 pm to 9:00 pm,**</mark>
in Room 101, Founders Hall.

Certification due dates for the HLS: Business Statistics (HLS) Modules
Registrations due by 11:59 p.m. on the due date/s shown below: <u>16 x 10 pts. = 160 points</u>

<u>No.</u>	<u>Module</u>	
1	9.5	Hyp. test for μ (Z-value)
2	9.6	Hyp. test for mean (t-value)
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 (dependent)
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	9.9	Chi-sq. test for association

<mark>**These modules are ideally completed by 10/16/2013.**</mark>

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

<mark>**These modules are ideally completed by 12/12/2013.**</mark>
If you certify but are unable to register a certification, come see me. No modules are accepted after 12/12 midnight.

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>Topic</u>	<u>Quiz Dates</u>
Excel CASE 1	Comparing population Means (Finance)	by 10/02
Excel CASE 2	1 way ANOVA (Marketing/ Management)	by 10/09
Excel CASE 3	Chi-Square test (Marketing)	by 11/06
Excel CASE 4	Multiple Regression (Real-Estate)	by 12/04

Excel case details are available through the Excel page on our course Web site at
http://www.coba.unt.edu/itds/courses/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 and students need to use their own analysis printout to answer the questions.

Student Getting Started Directions

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

1. Go to www.hawkeslearning.com and click on **get your access code**.
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 INSTALL THE SOFTWARE AT HOME:

1. Place CD #1 in the CD-ROM drive. (CD#1 is the only CD needed for the installation.)
2. Double-click on the **My Computer** icon.
3. Double-click on the CD-ROM drive (has a picture of a CD-ROM disk).
4. Double-click on Setup.exe.
5. Follow the on-screen instructions.
6. You will be prompted for a **Course ID.**
   -**If you have internet access**, select "Yes, the Course ID is:" and 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."

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 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

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

See www.hawkeslearning.com or Phone HLS at 843-571-2825 for help.