DSCI 2710-091, Data Description and Analysis, Fall 2013

CLASS (DAY/TIME):   Section 091, MW 1:00 – 2:20 pm, Founders (Dal2) room 101

INSTRUCTOR: Daniel D. Friesen, Ph.D.

OFFICE: Founders (Dal**2)** 236 **E-MAIL:** dfriesen@unt.edu

OFFICE PHONE: 972-338-1805   **OFFICE HOURS:** MW: 11a – 1p; M: 3 - 4p,
    T: 1 – 6p; W: 3 - 6p;
    And by appt.

REQUIRED MATERIALS:
1. UNT Business Statistics: DSCI 2710 / 3710, (**University of North Texas Courseware Edition**), Kvanli / Pavur / Keeling
    Comment: There are several versions of this textbook that are available. You want the most recent one. It will work for both DSCI 2710 and DSCI 3710.

2. Adventures in Statistics, by James S. Hawkes of Hawkes Learning.
    Note: This software is required to complete the assignments that comprise a substantial part of your grade. An individual copy **must be purchased** to obtain the certificate that allows logging into this software whether running it at home or in our lab.

OPTIONAL RESOURCES:
    www.cob.unt.edu/slides/kvanli these are Powerpoint slides, also available in Hawkes.

GOALS: At the end of the course, you should
1. have an increased understanding of 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. be able to manipulate simple statistical formulae to solve problems.

EVALUATION
To demonstrate your ability to use quantitative techniques in business, you will answer exam questions based on short cases. Rather than being purely numerical, problems will be presented in written language. In addition, you will work on Excel case studies that require you to use an Excel spreadsheet program to analyze and describe real-world business data. By simulating real business problems and requiring you to communicate in writing through the language of statistics, these evaluation instruments will reinforce the course objectives.

GENERAL COMMENTS:
1. Most students find that this class requires large amounts of resources to achieve success.
   a. One of the demanding aspects of this course is the large number of new topics, coupled with the multiple ways of presenting them. There are two primary learning sources (textbook and Hawkes); however, use of additional sources—e.g. tutors, Khan videos, other textbooks, etc.—could possibly add to the level of complexity (due to alternative ways of explanation and notation) while at the same time improving understanding. Finding the optimal mix is a challenge.
   b. The most important resource is time, along with the willingness to use it for this class. How much time are we talking about here? The old rule-of-thumb was 2-3 hours outside of class for every hour inside of class. If you use the 2 hour figure, you will need 6 hours per week outside of class to invest in this class for a moderate outcome (say "C" or "B" level of work). What do you do with your time? Read (text, Powerpoints, practice tests), practice your skills by working problems, work in the Hawkes tutorial program. Doing the assignments is essential to succeeding in this course. For optimal results, you should read every textbook problem. You should work as many of the textbook problems as possible. In addition to the problems in the textbook, the Adventures in Statistics modules (Hawkes) are intended to assist you in better structuring the learning time you spend on practice problems. Many of the textbook practice problems have answers in the back of the textbook. Keep up with the assignments!!
   c. You will be able to modify the resource requirements by the amount of facility in mathematics and Excel that you bring to class. If you are lacking in these skills, you will need to allocate more time, and vice-versa.

2. Regular and punctual attendance for the **full** period of each class is expected. Absences and tardiness are likely to cause you to miss significant materials; this generally results in a lower grade.

3. 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. You can download each PowerPoint file from home at www.cob.unt.edu\slides\kvanli or through Hawkes.

4. Practice problems are discussed in class. They come from the end-of-chapter / end-of-section problems. Understanding these problems is critical to learning the material well enough to complete exams within allotted time.

5. You should not hesitate to ask questions in class. Usually someone else has the same question, so, by asking in class, everyone can benefit from your question.

6. If you drop the course, you have the final responsibility for seeing that you are properly withdrawn or dropped before the scheduled last drop day. Anyone who stops attending class should execute the drop procedure since failure to do so may result in a grade of "F" which cannot be changed.

7. Course grades are available electronically in the week following final-exam week.

8. Hawkes Tutorial Exercises: Ten tutorial exercises using the Hawkes Learning modules are assigned. These are an important part of the course grade. You will not hand in anything here since the modules must be certified online. Detailed information on certifying Hawkes modules is presented at the end of this syllabus and in the course web site. If you encounter

difficulty with Hawkes assignments, print some screen shots for us to examine in class.

9. Excel Assignments: Four computer exercises using Excel are assigned. Output from these assignments will be used to complete on-line quizzes via Hawkes Learning System and, as such, are an important part of the course grade.

10. Exams: There will be three in-class exams. For each exam, you will be allowed to use a calculator, a formula sheet and tables. All exams are open book but **NOT** open notes.

Point Allocation:

Exam #1	180	
Exam #2	180	
Exam #3	180	
(Low exam of #1, #2, #3 will be thrown out)	-180	
Final exam (cumulative)	200	
Tutorials (Hawkes Learning) (10)	80	(8 points each)
Excel assignment quizzes (4)	60	(15 points each)
TOTAL	700	

Note: I seldom offer any extra credit in this course. There are three exceptions.
   a.   I will award 14 points to every student if the SETE response rate exceeds 90%.
   b.   There are extra Hawkes modules available for extra credit.
   c.   ETS Proficiency testing is scheduled through this course. It will occur between 9/11 and 9/27. I will award 7 points for completing either this test or an equivalent activity to be announced (but not both).
   d.   If you have a middle-level or high-level "D" in this course, I will likely raise that grade to a "C" if you have completed ***ALL*** of the required Hawkes modules and ***ALL*** of the Excel assignments / quizzes.

11. **Grading:**   Course average based on all components
                     90+ = A   80+ = B   70+ = C   60+ = D
                     Below 60   = F

DIVISION & UNIVERSITY POLICIES

1. If you wish to register a complaint, you should first discuss your complaint with your instructor. If this does not remedy the situation, you may contact Dr. John Wong, Associate Dean of Urban and Professional Studies.

2.   The instructor may allow a make-up exam, or the final exam could be counted twice instead of giving a make-up exam. The course grade of "I" is not given except for rare and very unusual emergencies, as per university guidelines.

3.   University policy regarding the Code of Student's Rights, Responsibilities and Conduct is contained in **The University of North Texas at Dallas Policy Manual**. You are responsible for knowing the information contained in this and all other official University publications.

4.   **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 972-780-3632.

5.   Dates of drop deadlines and final exams are published on the school website. Please be sure you keep informed about these dates.

6.   **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.

7.   **Honor Code Statement**:
      You will be required to agree to the following statement on all submitted work: *On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.*

DSCI 2710 SYLLABUS—Fall 2013

The syllabus below is a tentative outline for the semester. It is meant to be a guide and several items are subject to change. Certain topics may be stressed more or less than indicated. * indicates that ETS testing could be scheduled for that day.

Class Days	Topics	Sections in Text
Aug. 28	Syllabus **Hawkes: Obtain access code**	
Sept. 4	Introduction to Statistics	Chap. 1.1 - 1.3
Sept. 9 / 11*	Basic Definitions Frequency Distributions	Chap 1.4 – 1.6 Chap. 2.1

Class Days	Topics	Sections in Text
Sept. 16* / 18*	Descriptive Graphs	Chap. 2.2 - 2.6
Sept. 23* / 25*	blank week to account for ETS testing	
Sept. 30 / Oct. 2	Descriptive Measures	Chap. 3.1 - 3.6
Oct. 7 / 9	**Exam Review** ***** Exam #1 *****	**Chapters 1-3**
Oct. 14 / 16	Discrete Prob. Distribution Binomial Distribution Poisson Distribution	Chap. 6.1 - 6.2 Chap. 6.3 Chap. 6.4
Oct. 21 / 23	**Exam Review** ***** Exam #2 *****	**Chapters 5-6**
Oct. 28 / 30	Continuous Prob. Dist. The Normal Curve	Chap. 7.1 - 7.4 Chap. 7.5 - 7.7
Nov. 4 / 6	Inference & Sampling Confidence Intervals for the mean (σ known)	Chap. 8.1 & 8.2 Chap. 8.3
Nov. 11 / 13	Confidence Intervals for the mean (σ unknown) Catch up	 Chap. 8.4
Nov. 18 / 20	**Exam Review** ***** Exam #3 *****	**Chapters 7 and 8**
Nov. 25 / 27	Quality Improvement Control Charts	Chap. 9.1 - 9.4 Chap. 9.5
	Thanksgiving Holiday 11/28 – 11/29	
Dec. 2 / 4	Control Charts for Variables Control Chart Patterns Process Capability **Review for Final Exam**	Chap. 9.6 Chap. 9.8
Dec. 11	**Final Exam, same classroom, 1 pm – 3 pm, on 12/11/2013, Wednesday.**	

DUE DATES

Hawkes Learning Systems: Business Statistics

	Module	Module	Recommended "Due by" Date
1	1.2	Level of Measurement	10/9
2	3.1	Measures of Center	10/9
3	3.3	Constructing Samples	10/9
4	5.2	Binomial Word Problems	10/23
5	5.3	Poisson Word Problems	10/23
6	6.2	Reading a Normal Curve Table	10/23
7	6.4	Finding the Value of Z	10/23
8	6.3	Normal Distr. Word Problems	10/23
9	7.3	Sampling Distribution (Means)	11/20
10	8.4	Estimation (Means) Sigma Unknown	11/20
11	13.1	R Charts	12/12
12	13.4	Mean Charts using Range	12/12

Note: there are 12 assignments. **Only 10 are required**. You may complete the remaining 2 for extra credit. The dates are **recommended**; however, these modules may be completed **at any time** _prior to 12/12 midnight_.

Excel Assignments

- I will distribute written instructions for each assignment and discuss same. At that time, due dates will be established.
- Notes on accessing Hawkes to complete Excel Quizzes are shown below.

NOTE
The next several pages of the syllabus contain instructions for registering an Adventures module online. All modules must be registered online, whether you complete the module in one of the UNT computer labs or at home. After completing a module and registering it, you check your Hawkes progress report. **You should print a copy of the progress report every time you complete a module**. This hard copy of the progress report can be used in case of need if the system fails/crashes. Progress reports showing completion of a module may be used if the system errs in recording a module. The date on the progress report will be used to update the system. No late assignments taken after 12/12.

DSCI 2710 web site

This site contains
  · Excel data sets used in the Excel assignments
  · Link for registering the Hawkes modules

Notes on Excel Assignments:

Excel Assignments are assessed using the Web Quiz feature of the Hawkes Learning System. You will need your excel assignment outputs, your text, and your calculator to successfully take the assessment quiz for each assignment.

Taking Online Excel Quizzes

Get into the Hawkes software as usual (as though you were going to complete one of the fifteen modules). At the bottom of the page, select **Web Test.** 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 quiz. For more information, take a look at the Getting Started PowerPoint file [(6) Taking an Excel Quiz.ppt].

Notes
(1) These quizzes will not open until the scheduled time 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, you will receive either a -0- or partial credit for the portion you did complete.** Therefore, get everything you need (e.g., hard copy of the Excel spreadsheets, calculator, textbook) **BEFORE** opening the quiz.
(2) Be sure to turn off your firewall (if you have one) before starting an Excel quiz.

Notes on Hawkes:

To *__actually run__* the software you must purchase an access code. For those of you with a Visa or MasterCard, follow Option 1. If you don't have such a card, follow Option2.

Option 1: Go to http://www.hawkeslearning.com/webcodeform/makacode.asp and select **purchase an Access Code online**. Select **business statistics** in the Hawkes Learning Systems Title box. Follow the screen prompts).

Option 2: Purchase the box containing this software in the UNT Bookstore or wherever this software is sold on campus. This box contains the same CD given to you in class. On the back of the tear-off strip attached to the front cover is a code that is necessary in Step 3 (below). Obtain your access code by following these steps:

>**Obtaining your Adventures code:** Log on to www.quantsystems.com, click on **get your access code**, and follow the instructions for **I have my License Number** by entering your coupon information. You will receive your code within minutes! If there is a 15 minute delay in receiving your code, contact Hawkes Learning at 800-426-9538 and they will assist you. **Be sure to enter your name exactly as the registrar at UNT has your name (e.g., no nicknames, etc.).**

Certify an Hawkes Learning Adventures (AIBS) Module Online

> **Note**: If you have an internet connection while completing a module, the Hawkes Learning system should <u>automatically</u> register your module when you successfully complete the CERTIFY phase. In that case, you will <u>not</u> need the instructions on the next page.

1. Either Save, Print, or Write down the Certification code you are given at the end of the lesson.

2. Go to **http://www.quantsystems.com/untdbstat**. Enter the Access Code using one of the methods listed on the page.

3. Select your instructor from the drop down menu (only have to do this once). The appropriate course ID is **UNTDBSTAT**.

4. Select your section from the drop down menu (only have to do this once).

5. The next page will be your online progress report. At the top of the page is a button labeled "Register a lesson certificate". Click on that button.

6. Select the lesson name that you registered in from the drop down list on the next page.

7. Either type in your Certification code or load it from where you saved it. Click the OK button.

8. You will be shown a page that tells you whether the Certification code was valid or not and will give you the opportunity to enter another certification code for a different lesson if the code was correct or for the same lesson if the code was incorrect.

9. After registering the code(s). you can view your progress in the class by clicking on the button labeled "Progress Report". **You should print this Progress Report every time you register a module.**

Remember: The course ID is UNTDBSTAT.
See www.hawkeslearning.com or phone HLS at 800-426-9538 for help.

Some Useful Hawkes Directions

TO INSTALL THE SOFTWARE AT HOME:
1. Place CD #1 in the CD-ROM drive.
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 Hawkes 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. After entering your Access Code, you will be prompted to choose your instructor's name and the correct section from the pull-down menus.**

Remember: The course ID is UNTDBSTAT.

● Progress reports showing completion of a module may be given to your instructor if the system errs in recording a module.

Your Hawkes Progress Report will contain:
- your points for the Hawkes modules
- your Excel quiz points
- your scores for exams

● **No assignments will be counted after December 12, midnight.**