

DSCI 2710-004, Data Description and Analysis, Fall 2016

CLASS (DAY/TIME): Section 004, Th 1:00 – 3:50 pm, Founders 136

INSTRUCTOR: Theodore Larson

OFFICE: TBA **E-MAIL:** theodore.larson@untDallas.edu

OFFICE PHONE: Faculty Pool **OFFICE HOURS:** TBA
and by appointment

REQUIRED MATERIALS:

1. Discovering Business Statistics, Nottingham and Hawkes
2013 ISBN 978-1-935782-87-2
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.

GOALS: At the end of the course, you should

1. attain 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 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 *your* 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. 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.
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 are responsible 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** submit 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 (or send) 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 and a formula sheet. 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 (comprehensive) | 200 |
| Tutorials (Hawkes Learning, 10 | 80 (8 points each) |
| Excel assignment quizzes, 4 | <u>60</u> (15 points each) |
| TOTAL | 700 |

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

School of Business & 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. Karen Shumway, Dean of the School of Business.

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 972-338-1777. The Disabilities Services Coordinator is Dr. Cynthia Suarez (Cynthia.suarez@untdallas.edu).
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 classes at UNTD. 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—Spring 201

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

| <u>Class Days</u> | <u>Topics</u> | <u>Sections in Text</u> |
|-------------------|------------------------|-------------------------|
| Week 1 | Syllabus Statistics | page ix Chapter 1 |
| Week 2 | Data | Chapter 2 |
| Week 3 | Organizing, etc. | Chapter 3 |

| <u>Class Days</u> | <u>Topics</u> | <u>Sections in Text</u> |
|-------------------|---|---|
| Week 4 | Numerical Descriptives | Chapter 4, skip 4.6 |
| Week 5 | Exam #1 Review Tuesday Exam #1 Thursday | Chapters 1-4 |
| Week 6 | Exam Debriefing Probability | Chapter 5 |
| Week 7 | More Probability | Chapter 5, skip 5.7, use 5.8 as reference |
| Week 8 | Discrete Probability | Chapter 6 |
| Week 9 | Continuous RVs | Chapter 7, skip 7.4 |
| Week 10 | Exam #2 Review Tuesday Exam #2 Thursday | Chapters 5-7 |
| Week 11 | Exam Debriefing Samples and Sampling Dist | Chapter 8 |
| Week 12 | Samples and Sampling Dist | Chapter 8 |
| Week 13 | Estimating | Chapter 9 |
| Week 14 | Exam #3 Review Tuesday Exam #3 Thursday | Chapters 8-9 |
| Week 15 | Exam Debriefing Final Exam Review | |
| Finals Week | Final Exam , same classroom, day and time tba | |

DUE DATES

Hawkes Learning Systems: Business Statistics

| | <u>Module</u> | <u>Title</u> | <u>Recommended "Due by" Date</u> |
|----|---------------|--|----------------------------------|
| 1 | 1.1-1.3 | Getting Started | Week 6 |
| 2 | 2.5-2.6 | Levels of Measurement and Data Classifications | Week 6 |
| 3 | 3.4 | Frequency Distributions | Week 6 |
| 4 | 3.5-3.9 | Graphical Displays of Data: | Week 6 |
| 5 | 4.1 | Measures of Location | Week 6 |
| 6 | 4.2a | Measures of Dispersion | Week 6 |
| 7 | 5.1-5.2 | Classical Probability | Week 10 |
| 8 | 6.1-6.3 | Discrete Random Variables | Week 10 |
| 9 | 6.5 | The Binomial Distribution | Week 10 |
| 10 | 7.2 | Introduction to the Normal Curve | Week 10 |
| 11 | 7.3b | The Normal Distribution | Week 10 |
| 12 | 8.3 | The Distribution of the Sample Mean | Week 15 |

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 midnight on the day of the final.**

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

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 on your personal computing device. 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. No assignments accepted after 5/12/15.

DSCI 2710 web site

<http://www.cob.unt.edu/itds/courses/dsci2710/>

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 10 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.

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> and select **get your Access Code**. Select **Purchase an Access Code**. Follow the screen prompts. The product is named "Discovering Business Statistics."

Option 2: Purchase the box containing this software in the UNT Bookstore or wherever this software is sold on campus. 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:

Log on to www.hawkeslearning.com, click on **get your access code**, and follow the instructions for **Register Your 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.).**

See www.hawkeslearning.com or phone HLS at 800-426-9538 for help.

Some Useful Hawkes Directions

TO ENROLL IN YOUR INSTRUCTOR'S GRADEBOOK:

1. If you have internet access and have entered your 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. 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 UNTDDBS.

Your Hawkes Progress Report will contain:

- your points for the Hawkes modules
- your Excel quiz points

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

- **No assignments will be counted after midnight on the day of the final.**