The University of Oklahoma
Department of Economics
Econ 2843: Elements of Statistics (Section 2)
Spring 2018

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   Office Hours: Mondays and Wednesdays 3:00 - 4:00 pm, and by appointment

Teaching Assistants:
   1.) Tejas Ghirnikar: taghirnikar@ou.edu
       Office Hour: Tuesdays 11:00 - 12:00 at Wagner Hall Room No. 245.
   2.) Amir Tayebi: amir.tayebi-1@ou.edu
       Office Hour: Thursdays 12:00 - 1:00 at Cate Center One Room No. 235.
   3.) Zhengang Xu: zhengang.xu@ou.edu
       Office Hour: Fridays 1:30 - 2:30 at Wagner Hall Room No. 245.

Class Meetings: January 17 - May 4, 2018 on Mondays, Wednesdays, and Fridays.\(^2\)
   Time and Classroom: 12:30 PM - 1:20 PM at Dale Hall, Classroom No. 103.

Course Description
This is an introductory Statistics course, which surveys basic statistical techniques with
particular emphasis on business and economic applications. The learning objective of
this course is to improve students’ analytical skills in understanding and employing the
descriptive and inferential statistics. We begin this course by learning how to describe
the data in use. Then, we focus on probability theory, which enables us to understand
the essence of statistical inference. And for the rest of the course, we explore multiple
inference tools such as confidence interval estimation, hypothesis testing, and the analy-
sis of variance. These tools help us make use of sample data to reach conclusions about
population parameters.

Prerequisite
A grade of C or better in Mathematics 1503, 1743, or 1823

The Required E-textbook
Basic Business Statistics (13th ed.) by Mark Berenson, David Levine, and Kathryn Szabat
ISBN: 9780321921468

Note: You must purchase an access code to MyStatLab, which is an online platform that
accompanies the required e-textbook. Your homework will be completed on MyStatLab.

   • How to purchase the required e-textbook? You have two options: 1.) you may
     purchase this through the OU Bookstore for about $130 or 2.) you may purchase

\(^1\)If you have any questions, feel free and send me an email first. Use tabrizy@ou.edu. Then, either
one of my assistants or I will get back to you.
\(^2\)There will be no lectures during Spring Vacation (03/17-03/25).
this through MyStatLab platform for about $105.\textsuperscript{3} As long as you have access to the required e-textbook AND MyStatLab platform, I do not care which option you choose. Make your choice given your budget.

- How to use MyStatLab? At the end of this syllabus, you find a detailed instruction on how to add this course to your MyStatLab account. You will then be asked to do some required assignments that help you get started. It is extremely easy to work with this online platform.

- MyStatLab works the best when you use Google Chrome web browser. Also, make sure that you allow for pop-ups when working in this platform.\textsuperscript{4}

**Course Software**
The textbook in use provides detailed instructions on how to use Excel and Minitab to organize data, report summary statistics, and draw inference. Since OU students have free access to M.S. Office 365, I will be using Excel for this course.

**Course Websites**
The main course website is Canvas. From there, you will be directed to MyStatLab for the assignments. You will also be directed to an OU-Create Course Website for lecture materials such as lecture presentations, examples, and previous exams.

**Assessment**
Students’ performance will be assessed based on three exams (60% weight), course assignments (30% weight), and in-class quizzes (10% weight):

- The Exams Grade:
  There are two midterm exams and a final exam. The questions in the exams are multiple choice. They mostly test your general understanding of the subject matter rather than your computational skills. Though the concepts are closely related to each other, the exams are not cumulative. When it comes to final letter grade calculation, each exam has 20% weight. Your midterm exams are, therefore, as important as your final.
  If you miss one of the midterm exams, you will be asked to take a comprehensive make-up, which covers the materials that are covered in both of the midterm exams. Others have also the right to take the comprehensive exam if they wish. If your grade in the comprehensive make-up exam is greater than any of your midterms, I take the better grade into account. This exam is scheduled right after the final exam. That said, there is no make-up if you miss the final.

- The Assignments Grade:
  For each chapter, there are multiple assignments set up on MyStatLab. They must be done on that platform before the pre-determined due dates. To assess your performance, the average of your grades for all the assignments will be taken into account. Keep in mind that all the assignments have the same weight. Eventually, the average homework grade contributes to 30% of your final letter grade calculation. It should be noted that there is no make-up, unless you miss an assignment.

\textsuperscript{3}These prices are based on my recent inquiries. For exact pricing, you must refer to the OU Bookstore (http://bkstr.com) and Pearson’s website (http://mystatlab.com).

\textsuperscript{4}Google Chrome web browser can be downloaded for free at: http://www.google.com/chrome
due to unavoidable exceptional circumstances. In those circumstances, you are asked to contact one of my teaching assistants 24 hours before the deadline. The due date will then be extended accordingly. In case you were unable to contact my teaching assistants before the deadline, meet with me during my office hours or after the lecture. Given the circumstances, I will then decide if an extension could be provided. Otherwise, you receive zero for your missed work.

- The In-class Quizzes:
  This is an on-campus course. Students are expected to attend lectures. There are a number of in-class quizzes that contribute to 10% of your final grade. Depending on the lecture topic and timing, there are going to be sessions with one in-class quiz. There are also going to be sessions with no quizzes or sessions with more than one quiz. It depends on the topic and the timing of the lecture.
  Each in-class quiz is worth one point. No partial credits could be granted. At the end of the semester, we add up your in-class quiz points, and we divide them by N-6, where N is the number of in-class quizzes. This implies that even if you miss 6 in-class quizzes or if you answer 6 in-class quizzes wrong, you may still get the full credit. Given the weight of in-class quiz grade, if you end up with some extra credits, you may use them where you need; e.g., midterm or final exams.

The sum of your exams, assignments, and in-class quiz grades will determine your final letter grade on a scale where 90 or above is an A and less than 60 is an F. Tests will not be curved, needs based appeals will not be entertained, and grades will be determined in strict accordance with the above policy. Even if you end up with, say, 89.99999, you earn a grade of B.

Some Tips
In what follows, I share some tips on how to succeed in this course:

- Take part in classes. The key concepts are introduced in the lectures. You also get to see the application of those concepts in a number of in-class examples and activities. We also discuss how those new concepts relate to what we have already learned. This is the most efficient way to learn the concepts of interest and to see their applications. Also, you should keep in mind that 10% of your final grade is based on the result of your in-class quizzes.

- Take personal notes during the lectures. I share the materials that I use in my lectures. However, it is very useful if you also keep some personal notes. Keep your notes organized.

- Review the highlights of my lecture presentations on OU-Create. To access them, go to Canvas, click on Course Website, click on Lecture Presentations, and then choose the chapter that you are interested in.

- Read the textbook. It is quite innovative. It describes the concepts thoroughly while providing lots of examples and real life applications. It is a joy to read.\(^5\) The textbook in use also includes detailed instructions on how to use Excel for the topics that are discussed in each chapter. Follow those instructions carefully. Take personal notes once you read the textbook. Organize your notes.

\(^5\)For more information, refer to a box, entitled How to Use This Book, on page 5 of your textbook.
• You are supposed to do the assignments after the materials are covered in the lectures. To do so, review your personal notes from the lectures, highlights, and the textbook. Then, get started with the homework. Also, there are multiple tools in MyStatLab platform that help you solve the homework. Make use of them. It is again quite useful if you keep some personal notes, working on the homework. Keep your notes organized. Also, you should keep in mind that 30% of your final grade is based on your assignments.

• To prepare for the exams, review the lecture presentations, their highlights, in-class activities, and your personal notes. Also, make sure that you solve the previous exams that are available on OU-Create. To access them, go to Canvas, click on Course Website, click on Examples and Exams, and then choose the exam that you are interested in. Always begin from the most recent exams.

• At any stage, feel free to contact me or my teaching assistants if you have any problems with the concepts or the assignments. We have fixed office hours, and we are also available upon your request.

Some Notes
Read the following notes, and let me know, please, should you have any questions:

• My goal is to create a class in which everyone is welcome, included, and able to learn and succeed. Please talk to me if there is something I need to know in order to facilitate a positive and productive learning experience for you.

• If you require an accommodation based on disability, please let me know during the first week of the semester. Also, please bring the authorized documentation, issued by the Disability Resource Center.

• I follow the academic misconduct policy as stated in the University of Oklahoma Academic Integrity Code. Honor yourself, and honor the code.

• Except for a standard function calculator, which costs less than $10 these days, you are not allowed to use your laptop computer, tablet, smart phone, or any other electronic gadget during the lectures or the exams. They must be turned off, in fact. The only exceptions are when we use Excel in class or when you take in-class quizzes. For the assignments you will also be using a computer or a tablet. That, however, is done when the class is over. If you want to organize your notes on your computer or tablet, you may do so as well. However, that should also be done after the class. If you require to use an electronic gadget given a disability, please let me know during the first week of the semester. I will certainly allow for that.

• For all the exams, it is important that you correctly bubble in your name and your eight digit SoonerID on the scantron using a pencil. If you fail to do so, it will cost you 2.5 points.

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6 You will be introduced to those tools in the first set of assignments.
7 You may reach this center via phone: 405-325-3852 (Voice) and 405-217-3494 (VP). You may also contact them via email: drc@ou.edu
8 A student’s guide to academic integrity is available at: https://integrity.ou.edu/students.html
Course Outline

- Part I: Introduction (13 sessions)
  - Getting Started
    Lectures: 01/17 and 01/19; Assignments due date: 02/02 at 11:59 pm
  - Collecting, Organizing, and Visualizing Observations (Ch. 1 & 2)
    Lectures: 01/22 - 01/31; Assignments due date: 02/09 at 11:59 pm
  - Numerical Descriptive Measures (Ch. 3)
    Lectures: 02/02 - 02/12; Assignments due date: 02/16 at 11:59 pm
  - Concluding Remarks
    Lecture: 02/14

- The First Midterm on the Introductory Topics (Part I)
  Monday, 02/19 (12:30 PM - 1:20 PM at Dale Hall, Classroom No. 103)

- Part II: Probability (15 sessions)
  - Probabilities: A Survey (Ch. 4)
    Lectures: 02/16 - 02/26; Assignments due date: 03/02 at 11:59 pm
  - Probability Distributions (Ch. 5 & 6)
    Lectures: 02/28 - 03/12; Assignments due date: 03/16 at 11:59 pm
  - Sampling Distributions (Ch. 7)
    Lectures: 03/14 - 03/28; Assignments due date: 04/06 at 11:59 pm
  - Concluding Remarks
    Lectures: 03/30

- The Second Midterm on Probability (Part II)
  Monday, 04/09 (12:30 PM - 1:20 PM at Dale Hall, Classroom No. 103)

- Part III: Inference (14 sessions)
  - Confidence Interval Estimations (Ch. 8)
    Lectures: 04/02 - 04/13; Assignments due date: 04/20 at 11:59 pm
  - Hypothesis Testing (Ch. 9 & 10)
    Lectures: 04/16 - 04/27; Assignments due date: 05/04 at 11:59 pm
  - The Analysis of Variance (Ch. 11)
    Lectures: 04/30 and 05/02; No assignments
  - Concluding Remarks
    Lecture: 05/04

- The Final Exam on Inference (Part III)
  Thursday, 05/10 (1:30 PM - 2:30 PM at Dale Hall, Classroom No. 103)

- The Comprehensive Make-up Exam on Parts I and II
  Thursday, 05/10 (2:30 PM - 3:30 PM at Dale Hall, Classroom No. 103)

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9I reserve the right to make changes in the course outline.
To register for Elements of Statistics, Section 2 Spring 2018:

2. Under Register, select Student.
3. Confirm you have the information needed, then select OK! Register now.
4. Enter your instructor’s course ID: tabrizy41842, and Continue.
5. Enter your existing Pearson account username and password to Sign In.
   You have an account if you have ever used a MyLab or Mastering product.
   » If you don’t have an account, select Create and complete the required fields.
6. Select an access option.
   » Enter the access code that came with your textbook or that you purchased separately from the bookstore.
   » If available for your course,
     • Buy access using a credit card or PayPal.
     • Get temporary access.
7. From the You’re Done! page, select Go To My Courses.
8. On the My Courses page, select the course name Elements of Statistics, Section 2 Spring 2018 to start your work.

To sign in later:

2. Select Sign In.
3. Enter your Pearson account username and password, and Sign In.
4. Select the course name Elements of Statistics, Section 2 Spring 2018 to start your work.

To upgrade temporary access to full access:

2. Select Sign In.
3. Enter your Pearson account username and password, and Sign In.
5. Enter an access code or buy access with a credit card or PayPal.