The University of Oklahoma
Department of Economics

Econ 2843: Elements of Statistics (Section 2)
Spring 2020

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Teaching Assistants: Please refer to the homepage of the Canvas entry for a full list of teaching assistants who are helping me in this course. You will find their name, contact information, and office hours on that page. If you have any questions, feel free and send me an email first. Use tabrizy@ou.edu. Then, either one of my teaching assistants or I will get back to you in less than 36 hours.

Class Meetings: January 13 - May 1, 2020 on Mondays, Wednesdays, and Fridays.
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 analysis 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

Note: You must purchase an access code to MyLab Statistics with Pearson eText for Basic Business Statistics (14th ed.). This code provides you with an access to an online platform that includes an electronic copy of the textbook, homework, and some multimedia materials. You have access to this platform through Canvas.

• How to purchase the required access code? You have two options. You may purchase this through the OU Bookstore (http://ou.textbookx.com). Alternately, you

1There will be no lectures on Martin Luther King, Jr. Day (01/20) and Spring Vacation (03/14 - 03/22).
may purchase this through MyLab Statistics platform (http://mystatlab.com)—an 18-week student access would suffice. I do not care which option you choose, as long as you have the access code to MyLab Statistics with Pearson eText for Basic Business Statistics (14th ed.). Make your choice given your budget and preferences.

- How to use MyLab Statistics? At the end of this syllabus, you find a detailed instruction on how to sign up for MyLab Statistics through Canvas. 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.

- MyLab Statistics works the best when you use Google Chrome web browser. Also, make sure that you allow for cookies and pop-ups when working in this platform.\(^2\)

### Course Software

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

- Students must make sure that an up-to-date version of M.S. Excel is installed on their laptop devices.

- They should also make sure that the Data Analysis Toolpak, a free M.S. Excel add-in, is added to their M.S. Excel installation.

- If you do not have a well-functioning laptop computer, you may check out a device from OU Library.

### Course Websites

The main course website is Canvas. From there, you will be directed to MyLab Statistics for the textbook, homework, and some multimedia materials. 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 given an opportunity 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.

\(^2\)Google Chrome web browser can be downloaded for free at: http://www.google.com/chrome
• The Assignments Grade:
For each chapter, there are multiple assignments set up on MyLab Statistics. 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, regardless of the number of questions in each
homework, all the assignments have the same weight. Eventually, your average
assignment 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 due
to unavoidable exceptional circumstances. In those circumstances, you are asked
to contact me 24 hours before the deadline. The due date will then be extended
accordingly. In case you were unable to contact me 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.
At the end of the semester, we add up your in-class quiz points, and we divide them
by \( S-15 \), where \( S \) is the total number of points for in-class quizzes. This implies
that even if you miss few in-class quizzes or if you answer few of them 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. On the OU-Create Course Website, I share
the materials that I use in my lectures. Nonetheless, it is very useful if you also
keep some personal notes. Keep your notes organized.

• Review the highlights of my lecture presentations on the OU-Create Course Website.
To access them, go to Canvas, click on OU-Create Course Website, click on Lecture
Presentations, and then choose the chapter that you are interested in.
• Read the textbook. It is quite innovative. You have access to the textbook on MyLab Statistics (through Canvas). Your textbook describes the concepts thoroughly while providing lots of examples and real life applications. It is a joy to read. Your textbook 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.

• 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 MyLab Statistics 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 the OU-Create Course Website. To access them, go to Canvas, click on the OU-Create 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.\(^3\)

• I follow the academic misconduct policy as stated in the University of Oklahoma Academic Integrity Code.\(^4\) 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 devices during the exams.

• For all the exams, you are required to bring your OU ID Card, a pencil, and an eraser. Also, 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.

\(^3\)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
\(^4\)A student’s guide to academic integrity is available at: https://integrity.ou.edu/students.html
Course Outline

• Part I: Introduction (11 sessions)
  – Introduction with Emphasis on Data Organization (Ch. 1 & 2)
    Lectures: 01/13 - 01/24; Assignments due date: 01/31 at 11:59 pm
  – Numerical Descriptive Measures (Ch. 3)
    Lectures: 01/27 - 02/05; Assignments due date: 02/14 at 11:59 pm
  – Concluding Remarks
    Lecture: 02/07

• The First Midterm on the Introductory Topics (Part I)
  Monday, 02/17 (12:30 PM - 1:20 PM at Dale Hall, Classroom No. 103)

• Part II: Probability (14 sessions)
  – Probability Distributions (Ch. 5 & 6)
    Lectures: 02/10 - 02/28; Assignments due date: 03/06 at 11:59 pm
  – Sampling Distributions (Ch. 7)
    Lectures: 03/02 - 03/11; Assignments due date: 03/27 at 11:59 pm
  – Concluding Remarks
    Lectures: 03/13

• The Second Midterm on Probability (Part II)
  Monday, 03/30 (12:30 PM - 1:20 PM at Dale Hall, Classroom No. 103)

• Part III: Inference (17 sessions)
  – Confidence Interval Estimations (Ch. 8)
    Lectures: 03/23 - 04/10; Assignments due date: 04/17 at 11:59 pm
  – Hypothesis Testing (Ch. 9 & 10)
    Lectures: 04/13 - 04/24; Assignments due date: 05/01 at 11:59 pm
  – The Analysis of Variance (Ch. 11)
    Lectures: 04/27 - 04/29; No assignments
  – Concluding Remarks
    Lecture: 05/01

• The Final Exam on Inference (Part III)
  Wednesday, 05/06 (1:30 PM - 2:30 PM at Dale Hall, Classroom No. 103)

• The Comprehensive Make-up Exam on Parts I and II
  Wednesday, 05/06 (2:30 PM - 3:30 PM at Dale Hall, Classroom No. 103)

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5I reserve the right to make changes in the course outline.

6Except for some introductory materials and topics that relate to data organization, students are asked to review Ch. 1 & 2 on their own and submit their assignments on the pre-determined due date.
Student Registration Instructions for Canvas

First, enter your Canvas course

1. Sign in to Canvas and enter your Canvas course.
2. Do one of the following:
   » Select any Pearson link from any module.
   » Select a MyLab and Mastering link in the Course Navigation. Next, select Open MyLab and Mastering or a content link.

Next, get access to your Pearson course content

1. Enter your Pearson account username and password to Link Accounts.
   You have an account if you have ever used a MyLab or Mastering product.
   » If you don’t have a Pearson account, select Create and follow the instructions.
2. 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.
   If you’re taking another semester of a course, you skip this step.
3. From the You’re Done page, select Go to My Courses.

Note: We recommend you always enter your MyLab Statistics course through Canvas.

Get your computer ready

For the best experience, check the system requirements for your product at https://www.pearsonmylabandmastering.com/system-requirements/

Need help?

For help with MyLab Statistics for Canvas, go to https://help.pearsoncmg.com/integration/cg/canvas/student/en/content/get_started.htm