

The University of Oklahoma
Department of Economics
Econ 2843: Elements of Statistics (Section 4, VIDC)
Spring 2021

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Zoom Class Meetings: Jan. 25 - May 07, 2021 on Mondays, Wednesdays, and Fridays.¹

Zoom Class Time: 3:30 PM - 4:20 PM CST

Note: Our classes meet on Zoom. The link and password for our Zoom meetings is posted on the homepage of the Canvas entry for this course.

Office Hours: Mondays and Wednesdays 9:30 AM - 10:30 AM and by appointment

Note: All office hour meetings will be done on Zoom. They should all be scheduled ahead of time. Simply send me an email if you would like to schedule a meeting, so I could share with you the link and passcode for the Zoom meeting.

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. All of their office hours will be on Zoom, which is why they should be scheduled ahead of time.

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.

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 applied 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

Basic Business Statistics (14th ed.) by Berenson et al.

Note: You are required to rent/purchase the access code for MyLab Statistics with Pearson e-text for the above textbook. The obtained code provides you with an access to an

¹There will be no lectures on Friday March 5, 2021.

online platform that includes an electronic copy of the textbook, homework, and some multimedia materials. You will have access to this platform through Canvas.

- How to rent or purchase the required access code? You have two options. You may rent or purchase this code through the OU Bookstore. Alternatively, you may rent or purchase this code through MyLab Statistics platform. I have posted their URLs below. In case you decide to rent, you should know that an 18-week student access would suffice. You are free to make your choices based on your budget and preferences. Just make sure that you have the proper access code.
 - OU Bookstore: <http://ou.textbookx.com>
 - MyLab Statistics: <http://mystatlab.com>
- 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.
- In my experience, MyLab Statistics works the best when you use Google Chrome web browser. Also, make sure that you clear your browsing history at the beginning of the semester and allow for pop-ups in your web browser for Canvas and MyLab.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, I will be using M.S. Excel for this course. I will also be using M.S. Word. Thus, you must make sure that an up-to-date version of M.S. Office is installed on your device.

Note: The browser version of M.S. Office won't suffice for this course. You must install the actual software on your computer device or the actual app on your tablet device. Your smart phone may not come in handy. Install the actual software or app using: portal.office.com. You will be asked to enter your OU credentials. So be prepared. For help, you may call OU IT: (405) 325-4357.

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 (25% weight), and in-class quizzes (15% weight):

- The Exams Grade:

There are two midterm exams and a final exam. The questions in the exams are multiple choice. All exams will be done on Canvas. They will be open-resource as long as you do it on your own without help from any other person. The exams

²Google Chrome web browser can be downloaded for free at: <http://www.google.com/chrome>

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.

- **The Assignments Grade:**

For each chapter, there are multiple assignments set up on MyLab Statistics. They must be done on that platform before their 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 25% 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. 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 class is delivered online using live Zoom sessions. Students are expected to attend all the live lectures. There are a number of in-class quizzes that contribute to 15% 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 won't be curved, needs based appeals won't 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 Zoom class meetings. 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 quizzes. 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 15% 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 25% 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 send me the authorized documentation, issued by the Disability Resource Center.³

³You 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

- I follow the academic misconduct policy as stated in the University of Oklahoma Academic Integrity Code.⁴ Honor yourself and honor the code.
- For all the exams, you are required to carry your OU ID Card.

Course Outline⁵

- Part I: Introduction (12 sessions)
 - Introduction with Emphasis on Data Organization (Ch. 1 & 2)⁶
Lectures: 01/25 - 02/05; Assignments due date: 02/12 at 11:59 PM
 - Numerical Descriptive Measures (Ch. 3)
Lectures: 02/8 - 02/17 Assignments due date: 02/26 at 11:59 PM
 - Concluding Remarks
Lecture: 02/19
- The First Midterm on the Introductory Topics (Part *I*)
Monday, 03/01 (3:30 PM - 4:20 PM Online via Zoom and Canvas)
- Part II: Probability (14 sessions)
 - Probability Distributions (Ch. 5 & 6)
Lectures: 02/22 - 03/17; Assignments due date: 03/26 at 11:59 PM
 - Sampling Distributions (Ch. 7)
Lectures: 03/19 - 03/26; Assignments due date: 04/09 at 11:59 PM
 - Concluding Remarks
Lectures: 03/29
- The Second Midterm on Probability (Part *II*)
Monday, 04/12 (3:30 PM - 4:20 PM Online via Zoom and Canvas)
- Part III: Inference (16 sessions)
 - Confidence Interval Estimations (Ch. 8)
Lectures: 03/31 - 04/14; Assignments due date: 04/23 at 11:59 PM
 - Hypothesis Testing (Ch. 9 & 10)
Lectures: 04/16 - 04/28; Assignments due date: 05/07 at 11:59 PM
 - The Analysis of Variance (Ch. 11)
Lectures: 04/30 - 05/05; No assignments
 - Concluding Remarks
Lecture: 05/07
- The Final Exam on Inference (Part *III*)
Thursday, 05/13 (8:00 AM - 9:00 AM Online via Zoom and Canvas)
- The Comprehensive Make-up Exam on Parts *I* and *II*
Thursday, 05/13 (9:05 AM - 9:55 AM Online via Zoom and Canvas)

⁴A student's guide to academic integrity is available at: <https://integrity.ou.edu/students.html>

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