

ECON 262: Principles of Statistics II

Fall 2021

Course Information

UNR WebCampus (<https://unr.instructure.com/>)

Time: Tuesday – Thursday 3:00 PM – 4:15 PM

Room: OB 204

Instructor: Dat Huynh

Email: dath@nevada.unr.edu

Office Hours: available via Zoom and email

Course Description:

The class is designed to familiarize students with techniques used to analyze data and gain insight into specific questions about populations. Most often, data is collected, tested, and analyzed because it has managerial and/or research implications. The material in this course will be “applied”; that is, you will learn how to apply the appropriate statistical techniques to data with the intention of improving your decision-making ability.

Course Pre-requisites:

ECON 261 and IS 101

Required texts, course materials:

Business Statistics: Communicating with Numbers 4rd edition by Jaggia and Kelly.

The textbook and a **subscription to the McGraw-Hill Connect** system are required for this course. You can access the Connect page for this course through WebCampus. Go to “McGraw-Hill Connect” on the left side menu and create an account or sign in. We will be using *Connect* online homework system for assignments. You will need to have a calculator. Students will need to obtain a device with a webcam, microphone, and speaker as part of their course materials. A reliable internet connection is required. *Students will be required to complete an identity verification assessment or assignment.*

It’s highly suggested to bring your computer to every class. We will be using Excel during each class period. Handouts and other reading assignments may be used to supplement the text and will generally be available via the course WebCampus site.

WebCampus:

There is a class web site available through the University WebCampus. To access the class page through WebCampus, go to <https://wcl.unr.edu/>. Course-related material will be posted on the web site. Therefore, you should check this site regularly.

Student Learning Outcomes:

From the course description - Upon completion of this course:

1. Students will be able to apply the methodology of basic hypothesis testing and understand how the process is used in business decision making.
2. Students will be able to correctly identify and apply appropriate statistical tests for quantitative and qualitative single and two population parameters.
3. Students will be able to use and interpret correlation and develop simple and multiple regression models to address a variety of business examples.
4. Students will be able to develop and interpret output provided by statistical software for the statistical procedures covered in the course and be able to adequately verbalize the statistical conclusions provided by the software output.

Class Procedure:

Lectures will be delivered in person and will be scheduled on **Tuesday, and Thursday 3:00 PM – 4:15 PM**. There are no lectures during days and times reserved for testing (see schedule).

Attendance:

Students are highly recommended to attend class meetings. A student who misses a lecture is entirely responsible for catching up with the missed material. There are no make-up sessions offered to catch-up with missed instruction.

Microsoft Excel:

We will use Excel software in this class. Enrolled students will be given access to Excel via remote access. Go to www.remote.unr.edu. There are other applications, such as Microsoft Word, available remotely if needed. Demonstrations will be shown during lectures on how to access the remote server.

Homework:

There are 6 homework assignments. Homework assignments are scheduled and to be completed on *McGrawhill* Connect that is part of your WebCampus course under the menu link titled McGraw-Hill Connect. To find homework assignments and e-book, select Go to my Connect section.

Graded homework through Connect will be assigned on a regular schedule and **due at 11:59 PM (Please see the schedule for specific dates)**. You will be notified in class when changes are made to the schedule. Late homework will NOT be accepted. You will have **two attempt** to complete the homework, but you will have unlimited access to the “check my work” button. I highly recommend you check your work before submitting the assignment.

Test:

This course is divided into three sections (see Syllabus Schedule). There are three sections tests and they will be completed during scheduled testing times as outlined in the Syllabus schedule. For Test 1 and Test 2, each test is worth 15% of your final grade. Test 3 is cumulative and worth 20% of your final grade. No make-up exams will be given without prior notification (via email).

Each test has a time limit and one attempt. You will be required to use Excel during these exams. Exams are open book/note; however, no outside help (friends, relatives, Google, online...)

The final will be taken at the University Testing Center. You will have a window of 5 days to take each exam. Appointments to take the exam must be made at least two weeks in advance (appointments fill up quickly). Please go to the University Testing Center's website to schedule your test time. If you do not schedule the exam in advance and are not able to take the exam due to no available appointments, you will NOT be allowed to take the exam (your test grade will be a zero).

Class Activity/Quizzes:

There are weekly class activity/ quizzes throughout the semester. Missed quizzes may not be made up. I will drop your lowest quiz grade when determining your final grade at the end of the semester. Class activity/ quizzes are available on UNR Webcampus.

Grading:

I do not email grades or discuss your grades via email under any circumstances. If you have questions about an individual assignment grade or your final letter grade, you will need to make an appointment to speak in person on the phone. Grades are based on the procedure set forth in this syllabus and tables below:

Activity	Weights (%)
Homework (6)	40
Class Activity/Quizzes	10
Test 1	15
Test 2	15
Test 3	20
Total	100

Your final letter grade is assigned based on the following:

Percent of All Points	Letter Grade	Percent of All Points	Letter Grade	Percent of All Points	Letter Grade
93 and up	A	80 – 82.9%	B-	67 – 69.9%	D+
90 – 92.9%	A-	77 – 79.9%	C+	63 – 66.9%	D
87 – 89.9%	B+	73 – 76.9%	C	60 – 62.9%	D-
83 – 86.9%	B	70 – 72.9%	C-	59.9% and below	F

Tentative Schedule:

Section I: Inference and Hypothesis Testing:

This section covers the basics of estimation and hypothesis testing. We use the statistical techniques introduced in this section to answer specific research questions. We learn how to take a sample and apply the results to the population.

Week	Topics	Reading	Homework	Test
1	Review from ECON 261 Intro to Hypothesis Testing	9.1	HW 1 – Due on September 12	Test 1 – September 30
2	Hypothesis Testing	9.2 – 9.3		
3	Hypothesis Testing (Cont.)	9.3 – 9.4		
4	Statistical Inference	10.1 – 10.2	HW 2 – Due on September 26	
5	Statistical Inference (Cont.)	10.2 – 10.3		
6	Review session – September 28			

Section II: ANOVA and Chi-Square Tests:

The analysis of variance (ANOVA) is a common statistical procedure in statistics. In ANOVA, we get exposure in experimental design and techniques involving multiple populations. We investigate distributions and relationships among categorical variables by using Chi-Square techniques.

Week	Topics	Reading	Homework	Test
7	Chi-Square Tests	12.1	HW 3 – Due on October 17	Exam 2 – November 4
8	Chi-Square Tests	12.2		
9	One-way ANOVA	13.1 – 13.2	HW 4 – Due on October 31	
10	Two-way ANOVA	13.3		
11	Review session – November 2			

Section III: Correlation and Regression Analysis:

We will learn how to investigate the relationships among variables using correlation and regression techniques. These techniques are some of the most important multivariate techniques in statistics. Also, we will learn how to build mathematical models that describe and forecast.

Week	Topics	Reading	Homework	Test
12	Linear Regression	14.1 – 14.2	HW 5 – Due on November 21	Test 3 - December 9 - December 14
13	Multiple Regression	14.2		
14	Regression Tests (Thanksgiving – 11/26)	15.1	HW 6 – Due on December 5	
15	Common Violation Dummy Variable (if time allows)	15.4 17.1		
16	Review session – December 7			

Note:

I reserve the right to change the schedule. Any changes will be announced in class and in WebCampus Announcements.

School and Work

Our university accreditation requires that a three-unit lecture course include the equivalent of three hours in class for 16 weeks, plus 6-9 hours outside of class. Thus, a full-time student taking 15 units should be devoting 45-60 hours per week to their education, even with online courses.

The university recommends that you take 15 units per semester, since focusing your time and effort on your education leads to better grades and a greater chance of timely graduation. However, many of you do not have scholarships or parental support, and must work to pay for school. The College of Business recommendations recommends that if you are taking 15 units a semester, you should probably be working 10 hours or less per week. If you are working full-time, however, you should be taking only 6 units a semester. Unless you are exceptionally capable or choose unusually easy courses, doing more than this will cause your grades, your sleep, or your personal life to suffer.

University Policies

Statement of Disability and Academic Success Services

The University of Nevada, Reno supports equal access for students with disabilities. If you are a student who would normally seek accommodations in a traditional classroom, please contact me as soon as possible. You may also contact the Disability Resource Center for services for online courses by emailing drc@unr.edu or calling 775-784-6000. Academic accommodations for online courses may be different than those for seated classrooms; it is important that you contact us as soon as possible to discuss services. This course may leverage 3rd party web/multimedia content, if you experience any issues accessing this content, please notify your instructor.

Your student fees cover usage of the Math Center (775) 784-4433, Tutoring Center (775) 784-6801, and University Writing Center (775) 784-6030. These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

Statement on Academic Dishonesty

Cheating, plagiarism, or otherwise obtaining grades under false pretenses constitute academic dishonesty according to the code of this university. It includes copying answers from other students or online sources, using phrases or sentences from another source without both quote marks and a citation, or using graphs, charts, or ideas from an internet source for your statistical report without citation. It also includes making exams and answers available to other students. The University Academic Standards Policy (UAM 6,502) and the Student Code of Conduct define academic dishonesty and mandate specific sanctions for violations. Academic dishonesty will not be tolerated, and penalties include failing the assignment, failing the course, or even being dismissed from the university.

Statement on COVID-19 Policies

Students must complete and follow all guidelines as stated in the *Student COVID-19 Training* modules, or any other trainings or directives provided by the University. Students should be

vaccinated, and even vaccinated students may face masks and social distancing requirements to reduce the transmission of the coronavirus. Students testing positive for COVID 19, exhibiting COVID 19 symptoms, or who have been in direct contact with someone testing positive for COVID 19 may not attend any in-person activities. Students should contact the Student Health Center or their health care provider to receive care and who can provide the latest direction on quarantine and self-isolation.

In accordance with section 6,502 of the University Administrative Manual, a student may receive academic and disciplinary sanctions for failure to comply with policy, including this syllabus, for failure to comply with the directions of a University Official, for disruptive behavior in the classroom, or any other prohibited action. "Disruptive behavior" is defined in part as behavior, including but not limited to failure to follow course, laboratory or safety rules, or endangering the health of others. A student may be dropped from class at any time for misconduct or disruptive behavior in the classroom upon recommendation of the instructor and with approval of the college dean. A student may also receive disciplinary sanctions through the Office of Student Conduct for misconduct or disruptive behavior, including endangering the health of others, in the classroom. In such a case, the student shall not receive a refund for course fees or tuition.

Statement on Audio and Video Recording

Surreptitious or covert video-taping of class, unauthorized audio recording of class lectures without instructor permission, or any improper use of such recordings, is prohibited by law and by Board of Regents policy. Any authorized recording may only be used for personal and academic use.

Statement on Maintaining a Safe Learning and Work Environment

The University of Nevada, Reno is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, or stalking, whether on or off campus, or need information related to immigration concerns, please contact the University's Equal Opportunity & Title IX office at 775-784-1547. Resources and interim measures are available to assist you. For more information, please visit the Equal Opportunity and Title IX page.

Course Evaluations

You will be invited to give feedback on this course at the end of the semester through *What Do You Think?* At <http://www.unr.edu/evaluate>. Your evaluations are important.