

ECON 261 – Principles of Statistics I

FALL 2020 SYLLABUS

Professor.—Dr. Emir Malikov

Class Schedule.—Mon 8/24 through Fri 12/4 via asynchronous web-based delivery.

Course-Related Inquiries.—All course-related inquiries must be via the *Canvas Discussions Board*.

Personal Inquiries.—Email me at emir.malikov@unlv.edu to discuss private matters only.

Web Office Hours.—One-on-one online appointments are available on Tuesdays and Thursdays between 4 and 5:30pm. To schedule an appt, use [Google Calendar Appointment Slots](#).

COURSE DESCRIPTION

This is an introductory course in statistics for economics and business. The goal of this course is to provide students with foundational skills to analyze/interpret data and apply the results to decision making and prediction. The course will introduce students to the concepts and techniques of descriptive and inferential statistics (with different managerial and economic applications) that are extensively used in public- and private-sector decision making, including all areas of business. Understanding and using such statistical methods is essential to success in a modern, highly competitive and uncertain world. Topics include, but are not limited to, descriptive statistics, data visualization, elements of probability theory, hypothesis testing and regression analysis. The students will also gain exposure to data visualization, analysis and prediction using *Microsoft Excel*.

LEARNING OUTCOMES

Learning outcomes for the course are as follows: (i) be able to describe data sets through graphs and summary statistics, (ii) understand and use the concept of probability, (iii) understand the basic facts about random variables and probability distributions, (iv) have basic foundation and understanding of inferential statistics with applications in estimation and hypothesis testing, (v) apply these techniques in *Microsoft Excel*.

PREREQUISITES

MATH 124 or higher with a minimum grade of C.

TEXTBOOK and CONNECT

The required textbook is *Business Statistics: Communicating with Numbers*, by Sanjiv Jaggia and Alison Kelly, 3rd edition, with the *Connect* access code.

Note that *Connect* is NOT an e-book. *Connect* is the online platform that we will be using in this class for graded assignments. This course requires the use of *Connect* for access and completion of assigned interactive reading modules as well as problem sets. You may consider purchasing a printed/hard-copy version of the textbook together with a *Connect* access code. Alternatively, you may simply choose to directly purchase a *Connect* access code which comes bundled with a digital version of the textbook. That is, a hard copy of the textbook is *not* required, and there are two options available to you:

- **Option 1:** This is a cheaper option. Purchase the *Connect* access code for this course, and only the *Connect* access code. The *Connect* access code INCLUDES the e-book version of the textbook.
- **Option 2:** Purchase the hard copy of the textbook and *Connect* access code bundle at the UNLV campus bookstore. Note that this option also grants you access to an e-book version of the textbook.

Regardless of the option you choose: (i) access the *Connect* course section via the “McGraw-Hill Connect” tab inside *Canvas*, and then (ii) register for *Connect* using your access code.

The access code can be purchased (on its own or in a bundle with the hard copy of the textbook) at the UNLV bookstore or directly from McGraw-Hill upon logging onto the *Connect* platform.

CONNECT REGISTRATION

You must register for *Connect* by the beginning of the second week of classes. Any delay may affect your ability to complete assignments and therefore succeed in this course. No makeups for late registration will be offered. To access the *Connect* course section, use the “McGraw-Hill Connect” tab inside *Canvas*.

Registration.—Here are the first-time registration instructions. It is imperative that you register through *Canvas* as described below. This is the only way for you to register for the correct course section on the *Connect* platform.

1. Log into our *Canvas* course page.
2. Click on the “McGraw-Hill Connect” tab on the left-side menu.
3. Click “Begin.”
4. Log in or register as a new user. If you are a new user, enter a valid email address click on “Begin” to register. If you already have a *Connect* account, click “Sign in.”
5. If new to the platform, you will need to fill out the registration form.
6. Select from one of following options:
 - Option (1): if you have already purchased an access code at UNLV bookstore, then enter your *Connect* access code and click “Redeem.”
 - Option (2): click “Buy It” to purchase access for *Connect* directly from McGraw-Hill.
7. “Confirm” to complete the registration and pairing process.

For detailed instructions showing you how to register for *Connect*, see the “Connect+Canvas Student Registration” instruction file available on *Canvas* or watch this video:

<http://video.mhhe.com/watch/4q72PpEpzkXAd3hW4o52c8>

Using Connect.—After you create and pair your *Connect* account, you will be able to access the *Connect* platform directly from *Canvas* using the “McGraw-Hill Connect” tab without having to enter your login credentials again. You will also be able to accessing all *Connect* assignments using the links under the “Assignments” tab on *Canvas*.

System requirements.—Ensure your computer meets system requirements by going to this link:

<http://connect.mheducation.com/connect/troubleshoot.do>

TECH SUPPORT

Canvas/WebCampus.—For tech support concerning *Canvas*, contact the UNLV Office of Information Technology at (702) 895-0777 between 8am–8pm daily (including weekends and holidays) or submit a help request at <https://www.it.unlv.edu/it-help-desk>.

Connect.—If you are having troubles registering for or accessing *Connect*, please contact McGraw-Hill Education’s Customer Support. Live chat, email, and phone support are available 7 days a week. When contacting a support agent, you will always receive a case number. It will be important to save this case number if additional follow-up or documentation is needed. Email and chat: www.mhhe.com/support. Phone: (800) 331-5094. Hours (EST): Sun 12pm–12am | Mon – Thu 24 hours | Fri 12am–9pm | Sat 10am–8pm.

EXCEL TUTORIALS

The required software is *Microsoft Excel*, which will be used to learn data visualization skills, descriptive statistics, hypothesis testing and regression analysis. The most practical way to learn how to perform data analysis in *Excel* is by actually doing it yourself. You are expected to master the *Excel* data analysis tools by working through the detailed instructions provided in each chapter of the textbook as well as topic-specific tutorial videos accompanying the textbook. The links to these tutorial videos will be made available on *Canvas* as we progress in the semester. When studying *Excel* tutorials, it is a good idea to do so using the *SmartBook* version of the textbook available on *Connect* because it allows you to download data used in the textbook examples/tutorials (by clicking on the “File” button next to the text). This way, you would be able to follow along and replicate the steps using real data. While *Excel* practice assignments will not be graded, their completion is in your own interest if you wish to become proficient in the practical aspects of data analysis.

METHODS OF INSTRUCTION

Since this is an online class, the primary methods of instruction in this course are centered around self-instruction. The course contains eleven topic-specific modules, each of which includes all or some of the following components:

- Assigned **readings** from the textbook chapters.
- Interactive ***LearnSmart* assignments** on *Connect*.—Unlike the traditional reading assignments, these assignments provide an adaptive reading experience that feature practice questions. To incentivize you to keep up with the material, this component is graded. More on this later.
- **Supplementary videos**.—Readings will be supplemented by videos in which I will explain the lecture material as well as solve practice problems. These videos are meant to aid you in completing homework problem sets and prepare for exams. These videos will be posted on YouTube and made available to you incrementally as the semester progresses.
- Optional ***Excel* tutorials**.—This component is not graded.
- **Homework**.—Every module includes a graded problem set. More on this later.

TIPS FOR SUCCESS

To do well in the course, you need to study on a regular basis. This is especially important given the lack of opportunities for in-person class meetings and interaction.

1. Studying on a regular basis is important because mastering each subsequent chapter requires a proper understanding of the previously covered material. The course material, by design, has a staggered structure that not only continuously builds on itself but also gradually gets more and more involved and complex. This is why it is crucial that you study from day one and do so continually.
2. Read the textbook chapters and take the interactive *LearnSmart* assignments seriously. To maximize understanding and retention, take notes for each chapter you read. Remember, you shouldn’t read a book without a pen in your hand.
3. Work out the in-chapter practice problems for each topic covered in the course. They are accompanied with the detailed solutions and explanations. Relatedly, watch the supplementary videos in which I go over practice problems.
4. Practice on some of the end-of-the-chapter exercise problems; some even-numbered problems have answers at the back of the textbook. The more you practice, the better your grade will be.
5. Complete all the readings including the *LearnSmart* assignments BEFORE you start working on homework. Since you are allowed multiple attempts at homeworks assignments, treat the first attempt as a mock exam to diagnose how well you understand the material and to identify areas that need improving. Revisit the material before you make another attempt at the assignment.

6. If something is unclear, never hesitate to post an inquiry on the discussion board. If you have a question, it is very likely that someone else has the same question too.

GRADING

Your course grade consists of the following components:

<i>Component</i>	<i>Weight</i>
FinAid Engage Quiz	1%
<i>LearnSmart</i> Assignments	21%
Homework Assignments	30%
Exam I	16%
Exam II	16%
Exam III	16%

At the end of the course, your score on each of the above components will be converted to a 100 point based scale. Your final score in the class will be a weighted average of these points. I will then map your final score (also on a 100 point based scale) to the grade you will receive in the course using the following table:

<i>Grade</i>	<i>Final Score</i>	<i>Grade</i>	<i>Final Score</i>
A	≥ 93	C+	≥ 77 but < 80
A–	≥ 90 but < 93	C	≥ 70 but < 77
B+	≥ 87 but < 90	D	≥ 60 but < 70
B	≥ 83 but < 87	F	< 60
B–	≥ 80 but < 83		

Note #1.—When computing the final score, I round *up* to the nearest integer. That is, 85.86 is rounded up to 86 and so is 85.01.

Note #2.—Though unlikely, depending on performance of the class, I may adjust this table which you will be notified about. In such a case, no individual will be worse off than they were prior to an adjustment.

Note #3.—All grades will be recorded and continually updated in the *Canvas* gradebook. Most grades are recorded automatically upon completion of the assignments. Although, note that, in case of the *Connect* assignments, it sometimes may take a day or so to sync/import your grades into *Canvas*. If you think that your grade is missing, you must bring it to my attention within a week of the assignment’s due date. I will not chase your missing grades if the assignment was past due more than a week. Therefore, I suggest you check on your grades on a regular basis.

How to understand the “Total” score in the *Canvas* gradebook?—You can monitor your performance in the course throughout the semester by looking at your “Total” score in the *Canvas* gradebook. Although, it is crucial that you understand how it is being computed and why and how it changes over the course of the semester. Here are its key features:

- The “Total” score in the *Canvas* gradebook is your “as-of-now” course grade that the system continually computes for you. This as-of-now grade is “dynamic” and it constantly gets updated as more graded deliverables are assigned and completed with time.
- This tentative course grade might go up or down every time you complete an assignment or take a test because, when computing the “Total” score, the *Canvas* gradebook assumes that all future uncompleted/unattempted assignments/exams do not exist and effectively reassigns their weights to the past assignments/exams you have already completed. This means that your past assignments/exams will always be given a larger weight than they will be eventually when your truly final total score is computed at the end of the semester.

- Every time a new assignment is posted your “Total” score would mechanically go down before you even attempt it because the weights applied to past assignments by *Canvas* will decrease as the total number of assignments goes up. Your score will however rebound once you complete the new assignment. Having said that, by construction, the newly updated “Total” score will be higher than it was previously only if your new assignment score is greater than the weighted average of your scores on previous assignments.
- For concreteness, consider the following example. There is a total of three assignments in the course: test A, test B and test C with the corresponding weights being 25%, 35% and 40%, respectively. Say, you have only taken the first two tests so far and scored 62/100 on test A and 80/100 on test B. The *Canvas* gradebook will compute your as-of-now “Total” score to be $62\left(\frac{25}{25+35}\right) + 80\left(\frac{35}{25+35}\right) = 72.5$. Immediately after the third test C is posted but before you get to take it, your “Total” score will drop to $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 0\left(\frac{40}{25+35+40}\right) = 43.5$. If you score exactly 72.5 on test C, then your final “Total” score will remain what it had been before $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 72.5\left(\frac{40}{25+35+40}\right) = 72.5$. If you score more/less than 72.5 on test C, then your new “Total” score will also be greater/less than 72.5. E.g., if you get 75 on test C, then $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 75\left(\frac{40}{25+35+40}\right) = 73.5 > 72.5$; or if you get 70 on test C, then $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 70\left(\frac{40}{25+35+40}\right) = 71.5 < 72.5$.

The bottom line is, interpret your as-of-now “Total” score on *Canvas* with caution.

DELIVERABLES

All due dates are available in the course outline. No submission will be allowed past the due date. No due date extensions. No make-up assignments/exams. Missed assignments/exams will be scored as zero.

FinAid Engage Quiz.—There is only one quiz in this course. It is meant to satisfy the first two weeks activity requirement for UNLV courses. The quiz will be administered directly through *Canvas*.

LearnSmart Assignments.—*LearnSmart* assignments are the interactive SmartBook reading assignments on *Connect* in which you are asked to answer a set of practice questions on the assigned chapter reading. You can repeat these assignments as many times you want until you get full credit. They are not timed either but must be completed by the due date/time in order to count. To complete the assignment, you need to work through practice questions by clicking “Practice.” You can always go back to a *LearnSmart* assignment after its due date to review it as you work on homework assignments or prepare for exams. This is an easy-to-earn credit that requires little time commitment so do not miss out on this. For the details on how to complete *LearnSmart* assignments, watch this video: <https://www.youtube.com/watch?v=taeFQivodkU>.

Homework Assignments.—Homework assignments featuring both the quantitative and conceptual problems are also administered via *Connect*. These problem set assignments are not timed, and you will have three attempts to complete each assignment. Unlike the *LearnSmart* assignments, homework assignments will require significantly more time to complete so start working on them early. They are a great way to practice and master the material. You can access homework after the due date to review it as you prepare for exams. Any dispute, technical error, glitch identified on the online homework must be brought to my attention at least one day before the due date. You are therefore, once again, advised to start working on these assignments sooner than later.

Exams.—All exams are online and will be administered via *Canvas* and/or *Connect*. Exams are timed, and only one submission will be allowed. You will be able to access them during a two-hour time window between 4 and 6pm. If you have a valid reason for being unavailable during those hours, you must inform me at least 10 days in advance. While technically the exams are not cumulative and focus on the most recent material, mastering each subsequent exam still requires a proper understanding of all previously covered concepts because the course material, by design, has a staggered structure that continuously builds on itself. For the exam dates, see the course calendar and/or outline.

How soon will the assignments/exams be graded?—All grades will be posted within 24 hours after the deadline or sooner.

EXTRA CREDIT

I do NOT allow students to do any additional work for extra credit. All students are advised to consult with me throughout the semester to avoid end-of-the-semester “surprises.”

COMMUNICATIONS

Canvas Discussions Board.—All inquires related to the course logistics including, but not limited to, questions about the syllabus, due dates and other organizational/logistical questions, must be submitted using the *Canvas* discussions board. Please post such inquiries under the “General Q&A” discussion.

All inquires related to the actual course material must also be submitted via the *Canvas* discussions board. But please post these inquiries under “Course Material Q&A.”

The use of the discussion board is meant to recreate a sense of classroom online and have everyone benefit from your questions being answered. Please read older posts before submitting your question, in case it had already been asked and answered. Also, when it comes to the questions about course material, please keep in mind that sometimes it is very difficult to properly answer conceptual questions involving equations and formulas via a discussion post. In such rare instances, I will ask you to schedule a one-on-one appointment with me via WebEx in order to get your question answered/explained.

When to expect a reply?—I will go over the posts on the discussion board daily on weekdays (except for the holidays and school breaks) and reply to your questions. Therefore, it is safe to say that your question will be answered within 1 business day. Note that oftentimes I will reply to multiple questions in one single post as opposed to replying to each individual question separately.

Emails.—Please email me to discuss private matters only.

WEB OFFICE HOURS

I will hold weekly office hours online via WebEx every Tuesday and Thursday from 4 to 5:30pm (except for the school breaks or holidays). To take advantage of these hours, you need to schedule a one-on-one online appointment with me using [Google Calendar Appointment Slots](#) (clickable link). Such appointments should be made at least an hour in advance.

Once you reserve an available time slot, you will shortly receive an automated email with the meeting details. About 5 minutes before the time of your appointment, go to my WebEx “personal room” by following this link: <https://unlv.webex.com/meet/emir.malikov>. If you do not already have the software, you will be prompted to install WebEx on your computer or phone. Otherwise, your browser will initialize the WebEx app automatically. Once logged in, you will be placed in a waiting room pending my admission. Please be patient, in case I’m still wrapping up my earlier appointment. Also note that students do not have WebEx accounts at UNLV. However, you can still join our scheduled meeting — a WebEx account is NOT required.

If you cannot make my regular office hours work for you, email me and we’ll find the time that works for both of us. For the information about how to use WebEx, see <https://drive.google.com/file/d/1KRrWrqKm8-6qxKSXE5tGYkZ0XLwul-cV/view>.

ANNOUNCEMENTS

All announcements (including about assignments and exams), supplementary course materials and other relevant information will be posted on the *Canvas* course page. It is your responsibility to check for announcements daily.

UNIVERSITY POLICIES

Academic Misconduct. Academic integrity is a legitimate concern for every member of the Campus com-

munity; we all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the sources. See the Student Conduct Code, <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing Classes. Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct. Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities, are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative drop of the student from the course.

Copyright. The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available at <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC). The UNLV Disability Resource Center (SSC-A, Room 143, 702-895-0866, <https://www.unlv.edu/drc>) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Final Examinations. The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The general schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses. All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, <https://www.unlv.edu/studentconduct/misconduct/policy>, which defines, "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment" as a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with

other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades. The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources. Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries’ Research Consultation website: <http://guides.library.unlv.edu/appointments/librarian>. You can also ask the library staff questions via chat and text message at <http://ask.library.unlv.edu/>.

Missed Classwork. Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Policy for Missed Work, under Registration Policies, on the Academic Policies webpage, <https://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could reasonably have been avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/Unit Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: fine arts activities, competitive intercollegiate athletics, science and engineering competitions, liberal arts competitions, academic recruitment activities, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail. Rebelmail is UNLV’s official email system for students, and by University policy, instructors and staff should only send emails to students’ Rebelmail accounts. Rebelmail is one of the primary ways students receive official University communications, information about deadlines, major Campus events,

and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus is also acceptable.

Tutoring and Coaching. The Academic Success Center (ASC) provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the ASC website, <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center. One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Diversity Statement. As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see University Statements and Compliance, <https://www.unlv.edu/about/statements-compliance>. A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.

COURSE OUTLINE

Although unlikely, this course outline is subject to change as the semester progresses. Additional and up-to-date information will be posted on *Canvas*.

All *LearnSmart* and Homework assignments are due on either Wed or Sun @ 11:59PM.

All exams are due on either Wed or Sun @ 6:00PM.

The “Let’s Get Started” Module	
Dates	<i>By the first day of the semester</i>
Topic	Orientation
Read/Watch	Read the syllabus Explore information on the <i>Canvas</i> course page If questions, post on the discussion board under “General Q&A”
Deliverables	Complete the “FinAid Engage” Quiz, due Sun 8/30 @ 11:59PM
Module #1–2	
Dates	<i>Weeks 1–2</i>
Topic 1 Key Subtopics	Introduction ▷ Statistics and Data Statistics: Descriptive and Inferential Population vs. Sample Population Parameter vs. Sample Statistic Data and Their Types Variables: Qualitative vs. Quantitative Scales of Measurement
Topic 2 Key Subtopics	Descriptive Statistics ▷ Tabular and Graphical Methods Frequency and Relative Frequency Distributions Frequency Tables, Bar Charts, Pie Charts Frequency vs. Cumulative Frequency Distribution Frequency Tables, Histograms, Polygons, Ogives Shapes of Distribution Scatterplots
Read/Watch	Read Chapter 1 Read Sections 2.1–2.2 and 2.4 of Chapter 2 Watch Practice Problem Videos
Deliverables	Complete the “Chapter 2” <i>LearnSmart</i> Assignment, due Wed 9/2 @ 11:59PM Complete the “Chapters 1–2” Homework, due Wed 9/2 @ 11:59PM

Module #3	
Dates	<i>Weeks 2–3</i>
Topic	Descriptive Statistics ▷ Numerical Methods
Key Subtopics	Measures of Centrality: Mean, Median, Mode, Weighted Mean Percentiles and Boxplots Measures of Dispersion: Range, MAD, Variance, Standard Deviation, CV Relative Location: The Empirical Rule z-Scores Measures of Linear Association: Covariance, Correlation Coefficient
Read/Watch	Read Sections 3.1–3.2, 3.4, 3.6 and 3.8 of Chapter 3 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 3” <i>LearnSmart</i> Assignment, due Sun 9/13 @ 11:59PM Complete the “Chapter 3” Homework, due Sun 9/13 @ 11:59PM
Module #4	
Dates	<i>Weeks 4–5</i>
Topic	Probability ▷ Fundamentals of Probabilities
Key Subtopics	Experiments, Sample Space, Events Simple, Exhaustive Mutually Exclusive Events Unions, Intersections and Complements of Events Probability and Its Properties The Complement, Addition and Multiplication Rules Unconditional vs. Conditional Probability Independent vs. Dependent Events Joint Probability Total Probability Bayes’ Theorem Contingency and Joint Probability Tables
Read/Watch	Read Sections 4.1–4.4 of Chapter 4 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 4” <i>LearnSmart</i> Assignment, due Wed 9/23 @ 11:59PM Complete the “Chapter 4” Homework, due Wed 9/23 @ 11:59PM
Complete Exam #1, due Sun 9/27 @ 4:00PM–6:00PM	
Module #5	
Dates	<i>Week 6</i>
Topic	Probability ▷ Discrete Probability Distributions
Key Subtopics	Random Variables Discrete vs. Continuous Random Variables Probability Distribution: Probability Mass Function, Probability Density Function Discrete PDFs: Lists, Tables, Algebraic Formulations and Graphic Representations Cumulative Distribution Function Summary Measures for Random Variables: Expected Value, Variance, Std. Deviation Bernoulli Distribution
Read/Watch	Read Sections 5.1–5.2 of Chapter 5 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 5” <i>LearnSmart</i> Assignment, due Sun 10/4 @ 11:59PM Complete the “Chapter 5” Homework, due Sun 10/4 @ 11:59PM

Module #6	
Dates	Weeks 7–8
Topic	Probability ▷ Continuous Probability Distributions
Key Subtopics	Probability Density Function and Its Properties PDF and CDF Continuous Uniform Distribution and Its Properties Normal Distribution and Its Properties Standard Normal Distribution The Z-Table The Standard Normal Transformation
Read/Watch	Read Sections 6.1–6.2 of Chapter 6 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 6” <i>LearnSmart</i> Assignment, due Wed 10/14 @ 11:59PM Complete the “Chapter 6” Homework, due Wed 10/14 @ 11:59PM
Module #7	
Dates	Weeks 8–9
Topic	Statistical Inference ▷ Sampling Distribution
Key Subtopics	Population vs. Sample: Population Parameter vs. Sample Statistic Simple Random Samples Estimators are Random Variables Point Estimators vs. Estimates Sampling Distributions The Sampling Distribution of the Sample Mean Expected Value and Variance of the Sample Mean Bias and Unbiasedness of Estimators Consistency of the Sample Mean The Central Limit Theorem Normality of the Sample Mean
Read/Watch	Read Sections 7.1–7.2 of Chapter 7 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 7” <i>LearnSmart</i> Assignment, due Wed 10/21 @ 11:59PM Complete the “Chapter 7” Homework, due Wed 10/21 @ 11:59PM
Module #8	
Dates	Weeks 9–10
Topic	Statistical Inference ▷ Interval Estimation
Key Subtopics	Confidence Intervals Confidence Interval for μ when σ is Known Confidence Interval for μ when σ is Unknown
Read/Watch	Read Sections 8.1–8.2 of Chapter 8 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 8” <i>LearnSmart</i> Assignment, due Sun 11/1 @ 11:59PM Complete the “Chapter 8” Homework, due Sun 11/1 @ 11:59PM
Complete Exam #2, due Wed 11/4 @ 4:00PM–6:00PM	

Module #9	
Dates	<i>Weeks 11–12</i>
Topic	Statistical Inference ▷ Hypothesis Testing
Key Subtopics	The Null and Alternative Hypotheses One- and Two-Tailed Tests Type I and Type II Errors The p -Value Approach to Testing The Critical Value Approach to Testing Two-Tailed Tests and Confidence Intervals
Read/Watch	Read Sections 9.1–9.3 and Appendix 9.1 of Chapter 9 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 9” <i>LearnSmart</i> Assignment, due Sun 11/15 @ 11:59PM Complete the “Chapter 9” Homework, due Sun 11/15 @ 11:59PM
Module #10	
Dates	<i>Week 13</i>
Topic	Statistical Inference ▷ Difference Between Two Means
Key Subtopics	Independent Random Samples Confidence Interval for $\mu_1 - \mu_2$ when σ_1 and σ_2 are Known Confidence Interval for $\mu_1 - \mu_2$ when σ_1 and σ_2 are Unknown but Equal Test for the Difference between Two Population Means
Read/Watch	Read Section 10.1 of Chapter 10 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 10” <i>LearnSmart</i> Assignment, due Sun 11/22 @ 11:59PM Complete the “Chapter 10” Homework due Sun 11/22 @ 11:59PM
Module #11	
Dates	<i>Weeks 14–15</i>
Topic	Regression Analysis ▷ Simple Linear Regression
Key Subtopics	Testing for Correlation Simple Linear Regression, OLS Goodness-of-Fit Measures: Regression Standard Error and R^2 Test of Individual Significance
Read/Watch	Read Sections 14.1–14.3 of Chapter 14 Read Section 15.1(pp.546–550 only) of Chapter 15 Watch Lecture Videos Watch Practice Problem Videos
Deliverables	Complete the “Chapter 14” <i>LearnSmart</i> Assignment, due Wed 12/2 @ 11:59PM Complete the “Chapters 14–15” Homework, due Wed 12/2 @ 11:59PM
Complete Exam #3, due Sun 12/6 @ 4:00PM–6:00PM	