Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Year: 2025
Course Prefix: MGMT
Course and Section #: 2340-X04
Course Title: Business Statistics I
Credits: 3

Course Description

Presents an application of statistics in business and economics covering methods of collecting, analyzing, and presenting data. Includes frequency distributions, averages, index numbers, probability, sampling, estimation, analysis of variance, time series, regression, and correlation.

Course Attributes

This course has the following attributes:

☐ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☒ Discipline Core Requirements in Program
☐ Elective Core Requirements in Program
☐ Open Elective

Other: *Click here to enter text.*

Instructor Information

Instructor Name: My name is Jacque Westover. Most students call me Jacque (pronounced "Jackie"), but you can call me Dr. Westover if you prefer.

Student Learning Outcomes

Presents an application of statistics in business and economics covering methods of collecting, analyzing, and presenting data.
Includes frequency distributions, averages, index numbers, probability, sampling, estimation, analysis of variance, time series, regression, and correlation.

Course Materials and Texts

Business Statistics – Communicating with Numbers, 5th edition. By Sanjiv Jaggia & Allison Kelly.

McGraw Hill Connect

RStudio

Microsoft Excel

Course Requirements

Course Assignments, Assessments, and Grading Policy

Grading Scale:

A	93-100%	C	73-76%
A-	90-92%	C-	70-72%
B+	87-89%	D+	67-69%
B	83-86%	D	63-66%
B-	80-82%	D-	60-62%
C+	77-79%	E	0-59%

Assignments and Assessments:

Homework	5%
Discussions (1% each)	5%
Quizzes	10%
Projects (10% each)	40%
Exams (10% each)	40%

Homework

Homework is necessary for completion of the course. We will be using the McGraw-Hill Connect online learning and homework platform. Homework assignments are designed to help you practice what you learned throughout the week and will typically be due on Fridays at 11:59pm. You will be automatically assessed for the cost of this online platform. Homework assignments are worth 5% of your total grade.

Quizzes

There will be a quiz each week that new course content is covered. Quizzes are timed for 90 minutes, and you will have 2 attempts for each quiz. Quizzes will typically be due on Sundays at 11:59pm. I will drop the lowest two quiz scores from your overall grade. Quizzes are worth 10% of your total grade.

Discussions Days

There will be five (5) Discussions Days throughout the semester. The first Discussion will be a Discussion Board on Canvas and will just be introductions (see Canvas for more details). Each Unit will include a Discussion Day which will consist of two parts: (1) You will be required to read an article/watch a video and the write a Reflection answering certain questions on the topic (due prior to the in-class Discussion Day); (2) You will also be required to attend the in-class Discussion Day where we will discuss in groups and as a class the given topic. Discussions are worth 5% of your total grade.

Projects

There will be four (4) projects completed this semester. Project are submitted on Canvas. Project assignment details will be given as we approach their due date. Each project is worth 10% of the total grade, accounting for 40% of your total grade. **Late projects will be accepted for a 30% deduction**. Nothing will be accepted after the last day of the class.

Exams

There are four (4) exams worth 10% each, for a total of 40% of your course grade. **Exams are open-book, open-note, and open-R (and/or calculator/Excel), but NOT open-web or another person.** Students are required to take every exam using Proctorio (please see **"Proctorio Info"** section of the syllabus). Make-up exams are only available in cases of well-documented medical or family emergencies. See the course schedule for dates.

Required or Recommended Reading Assignments

All required readings use chapters from the course text that align with the lectures below.

General Description of the Subject Matter of Each Lecture or Discussion

Week	Section	Learning Objective Description
1	Intro	Syllabus, Canvas, Connect, R Studio.
	3.1	Calculate and interpret measures of central location.
	3.2	Interpret a percentile and a boxplot.
	3.4	Calculate and interpret measures of dispersion.
	3.5	Explain the Sharpe ratio.
2	1.1	Explain the various data types.
	1.2	Describe variables and types of measurement scales.
	2.1	Construct and interpret a frequency distribution chart for a categorical variable.
	2.4	Construct and interpret a scatterplot.
	3.7	Calculate and interpret measures of association.
3	2.3	Construct and interpret a frequency distribution chart and histogram for a numerical variable.
4		**Unit 1 Assessment Week**
5	4.1	Describe fundamental probability concepts.
	4.2	Apply the rules of probability.
	4.4	Apply the total probability rule and Bayes' theorem.
6	5.1	Describe a discrete random variable and its probability distribution.
	5.2	Calculate and interpret summary measures for a discrete random variable.
	5.3	Calculate and interpret summary measures to evaluate portfolio returns.
	3.6	Apply the empirical rule and z-scores.
7	6.1	Describe a continuous random variable.
	6.2	Explain the characteristics of the normal distribution Calculate and interpret probabilities for a random variable that follows the normal distribution.
8		**Unit 2 Assessment Week**
9	7.1	Explain common sample biases. Describe various sampling methods.
	7.2	Describe the sampling distribution of the sample mean. Explain the importance of the central limit theorem.
	7.3	Describe the sampling distribution of the sample proportion.
	7.4	Use a finite population correction factor.
10		**Spring Break**
11	8.1	Explain a confidence interval Calculate a confidence interval for the population mean when the population standard deviation is known. Describe the factors that influence the width of a confidence interval.
	8.2	Discuss features of the t-distribution. Calculate a confidence interval for the population mean when the population standard deviation is not known.
	8.3	Calculate a confidence interval for the population proportion.
	8.4	Select a sample size to estimate the population mean and the population proportion.
12		**Unit 3 Assessment Week**
13	9.1	Define the null hypothesis and alternative hypothesis. Distinguish between Type I and Type II errors.
	9.2	Conduct a hypothesis test for the population mean when sigma is known.
	9.3	Conduct a hypothesis test for the population mean when sigma is unknown.
	9.4	Conduct a hypothesis test for the population proportion.
14	14.1	Conduct a hypothesis test for the population correlation coefficient.
	14.2	Estimate and interpret simple and multiple linear regression models.

15	14.3	Interpret goodness-of-fit measures.
16		Unit 4 Assessment Week

Required Course Syllabus Statements

Generative AI
This course requires you to complete assignments that assess your understanding and application of the material. You are expected to do your own work, and the use of specifically approved artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers is allowed on all assignments. Acceptable AI tools will be discussed throughout the course.

If you have questions about acceptable use of AI tools, please consult the instructor before submitting your work.

Using Remote Testing Software
☐ This course does not use remote testing software.

☒ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU Accessibility Services at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity
At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the

community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation
UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.
To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.