STAT 1111.10: Business and Economics Statistics
Fall 2021 Course Syllabus

Course Description
The course will cover the basics of Statistics, Probability and their applications. The main topics to be covered include descriptive statistics for univariate and bivariate data, probability and random variables, binomial and normal distributions, confidence intervals and hypothesis testing (one sample and two samples), correlation and regression.

Note: Stat 1051,1053, 1091, 1104, 1111, 1127 are similar courses and credit for only one of these courses can be given. Please contact me for further details.

Course Information
Course Title: Business and Economics Statistics
Course Number: STAT 1111, section 10
Location: Funger Hall, room 210
Time: Wednesdays and Fridays from 9:35-10:50 AM
Text: *Statistics for Business and Economics, 14th Edition* by McClave et al.

Contact Information
Instructor: Katie Adams
Office: Rome Hall 751
E-mail: kmadams@gwu.edu
Office Hours: On Webex on Tuesdays from 4:30-6:30 PM, in person by appointment.

Teaching Assistant: Muzhe Guo
E-mail: muzheguo@gwu.edu
Office hours: On Webex on Thursday from 4:00-6:00, in person by appointment.

Student Responsibilities
Please check your blackboard regularly, as I will post homework assignments, quizzes, and announcements on Blackboard. You will need a calculator to do your assignments. Please have one available, especially during tests and quizzes. Cell phones are not allowed during the tests and quizzes. The course does not require any background in calculus. Basic knowledge of algebra and arithmetic are sufficient.

If you need literally ANYTHING, school related or otherwise, please do not hesitate to contact me :)

Assignments

Homework (300 points) I will use Blackboard to post homework assignments. Each problem set will consist of about 15 problems, which will be graded on completion.

Quizzes (200 points) Every week there will be a take home quiz based on a few of the homework problems. Quizzes will be posted online at 12:00 PM on Wednesday and must be completed by 12:00 PM Thursday.

Project (100 Points) At the end of the semester I will assign a group project based on your usage of the statistical software SPSS. Further details TBA.

Exams (450 points) There will be a closed book midterm and a closed book Final exam. You are allowed to use your own formula sheets (handwritten, no page limit).
> *Midterm Exam (200 points)* The midterm is scheduled for Wednesday October 13.
> *Final Exam (250 points)* TBA

Grading Policy

This class will be graded out of 1000 points. Homework is worth 300 points, quizzes are worth 200 points, the project is worth 100 points, the midterm is worth 200 points, and the final is worth 250 points. However, it is possible to earn up to 1050 points in this class -- in other words, I have 50 points of extra credit built in, which is roughly equivalent to a 'step' in your letter grade (i.e. the difference between a B- and a B and so on). Grades will be calculated as follows:

A: 940-1050 points	B+: 870-899 points	C+: 770-799 points	D+: 670-699 points	F: below 600 points
A-: 900-939 points	B: 840-869 points	C: 740-769 points	D: 640-669 points	
	B-: 800-839 points	C-: 700-739 points	D-: 600-639 points	

Attendance Policy

While class sessions will be held in person, recordings will be available in case you have missed an in-person session. However, recordings are not a substitute for in-person lectures, as technical issues are always a possibility. Attendance is not mandatory, but it is important to be present for all lectures.

Learning Outcomes

At the end of the semester you should be able to
1. Summarize data using graphical and numerical methods
2. Apply laws of probability
3. Construct and interpret large-sample and small-sample confidence intervals
4. Evaluate evidence for and against hypotheses using statistical tests
5. Find the least-squares equation for simple linear regression and assess the utility of the model

Course Schedule

This is the proposed schedule for the topics we will cover this semester. Note that this schedule is subject to minor changes throughout the semester based on the needs of the class.

Date	Topic(s) and readings	Assignment(s) Due
W 9/1		
F 9/3	Types of statistics, types of data	
W 9/8	Graphical methods of describing data	
F 9/10	Numerical methods of describing data	
W 9/15	Continuation Numerical methods, Introduction to probability	
F 9/17	Basic rules of probability	HW 1 & Quiz 1: Graphical and Numerical Methods
W 9/22	Conditional Probability	HW 2 & Quiz 2: Rules of Probability
F 9/24	Conditional Probability	
W 9/29	Introduction to random variables	HW 3 & Quiz 3: Conditional Probability
F 10/1	Operations with random variables	
W 10/6	Operation with random variables	HW 4 & Quiz 4: Random variables
F 10/8	Review for Midterm	
W 10/13	Midterm	
F 10/15	Sampling distribution (mean)	Midterm review homework
W 10/20	Sampling distribution (proportion)	
F 10/22	No class -- fall break	
W 10/27	Introduction to confidence intervals	HW 5 & Quiz 5: Sampling distributions
F 10/29	Confidence intervals for large samples	
W 11/3	Introduction to hypothesis testing	HW 6 & Quiz 6: Confidence intervals
F 11/5	One sample hypothesis testing (mean)	
W 11/10	One sample hypothesis testing (proportion)	HW 7 & Quiz 7: Hypothesis testing
F 11/12	Two sample hypothesis testing	
W 11/17	Introduction to linear regression	HW 8 & Quiz 8: Hypothesis testing
F 11/19	Finding and using linear models	
W 11/24	No class -- thanksgiving break	
F 11/26		
W 12/1	Review of probability	Probability review HW
F 12/3	Using probability in business and econ	
W 12/8	Review of statistics	Statistics review HW
F 12/10	Using statistics in business and econ	

University Policies

Average minimum amount of out-of-class or independent learning expected per week
In a 15-week semester, including exam week, students are expected to spend a minimum of 100 minutes of out-of-class work for every 50 minutes of direct instruction, for a minimum total of 2.5 hours a week. A 3-credit course should include 2.5 hours of direct instruction and a minimum of 5 hours of independent learning, totaling a minimum of 7.5 hours per week. More information about GW's credit hour policy can be found at: provost.gwu.edu/policies- forms (webpage); or provost.gwu.edu/files/downloads/Resources/Assignment-Credit-Hours-7-2016.pdf (form).

Observance of religious holidays
In accordance with University policy, students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. For details and policy, see: students.gwu.edu/accommodations-religious-holidays.

Academic Integrity
Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information. For the remainder of the code, see: http://www.gwu.edu/~ntegrity/code.html

Support for students outside the classroom
DISABILITY SUPPORT SERVICES (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Rome Hall, Suite 102, to establish eligibility and to coordinate reasonable accommodations. For additional information see: disabilitysupport.gwu.edu/

UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300
The University's Mental Health Services offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include: crisis and emergency mental health consultations, confidential assessment, counseling services (individual and small group), and referrals. For additional information see: counselingcenter.gwu.edu/

Security
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.