

Statistics for Business I

ECON-3402

Spring 2022 Section 05 3 Credits 01/08/2022 to 05/10/2022 Modified 01/11/2022

Description

Course emphasis is on applications of statistics in business. Topics include methods of presenting data, numerical measures and correlation, probability theory and probability distributions, sampling distributions, estimation, and hypothesis testing.

Requisites

Prerequisites:

(MATH 1111 or MATH 1113) and CISM 2201 and Richards Col Upper Division RCUD

Corequisites:

Contact Information

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Office: 347 Richards Hall

OFFICE HOURS:

Tuesday and Thursday 3:30-5:00pm, Monday and Wednesday 9-11 am, after class and other times by arrangement.

Meeting Times

Statistics for Business I. Updates to the syllabus will be posted on the CourseDen site for the course. The class meets TTH 5:30-6:45 pm in Roy Richards Sr. Hall 201.

Materials

TEXTBOOK/OTHER RESOURCES:

- 1) [Introductory Business Statistics](#) (OpenStax, 2018). There is no need to purchase this book. Chapters that we use from this book have been uploaded into the CourseDen site for the course.
- 2) You will also be required to watch selected videos from the statistics video series titled "Against All Odds." The videos can be found at (<https://www.learner.org/series/against-all-odds-inside-statistics/>).
- 3) Powerpoint lecture notes for the course will be posted on the Course Den site.

Outcomes

COURSE LEARNING OBJECTIVES: Students will:

- construct and interpret tabular and graphical methods of presenting qualitative and quantitative data.

- construct and interpret summary numerical measures of location, variability, and association for the sample and the population.
- apply basic probability concepts, expected value, and variance to a variety of business applications
- use discrete and continuous probability distributions and sampling distributions in a variety of business applications.
- construct and interpret interval estimates and be able to determine the required sample size for constructing interval estimates.
- estimate regression models, evaluate the results of regression models, and use the results for prediction and forecasting.
- use Microsoft Excel to generate descriptive statistics and perform regression and correlation analysis.

✓ Evaluation

Grading in the course will be based on your performance on four exams, five in-class quizzes and a take-home assignment (using Excel). The examinations will be composed of short answer and multiple-choice questions based on class lecture/discussion and on the assigned videos from the *Against All Odds* video series. Each of the exams will be worth 21% of your grade. The exams will be taken in-class. If you must miss an exam, you will need to take the comprehensive final (as the makeup). For students who have completed all four exams, I will allow the final to replace your lowest exam (assuming the grade on the final is better than your lowest exam). There will also be five in-class quizzes during the semester. The dates for these quizzes are listed in the Course Schedule. These quizzes will contain questions based on the *Against All Odds* Video series. The quizzes will count for a total of 8% of your grade. There will be one take-home assignment in the course (using Excel). The assignment will involve using the graphical and statistical features of Excel including simple linear regression. This Excel assignment will count for 8% of your grade. Details on the assignment will be provided at a later date.

Criteria

Breakdown

☰ Assignments

Listed under Evaluation

📅 Schedule

Class	Topics	Chapters/Videos/Assignments
1. 1/11/22	Intro to Course/Sampling and Data	Textbook: Chapter 1

2. 1/13/22	No Class Meeting	Watch Videos 1-6 <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
3. 1/18/22	Sampling and Data	Textbook: Chapter 1
4. 1/20/22	Descriptive Statistics	
5. 1/25/22	Descriptive Statistics Quiz #1	Textbook: Chapter 2 Quiz #1 covers videos 1-6 <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
6. 1/27/22	Descriptive Statistics	Textbook: Chapter 2
7. 2/1/22	Exam #1*	The exam covers the material in Chapters 1 and 2 in text and in Videos 1-6: <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
8. 2/3/22	Probability Topics	Textbook: Chapter 3
9. 2/8/22	Probability Topics	Textbook Chapter 3
10. 2/10/22	Probability Topics/Discrete Random Variable	Textbook: Chapters 3-4
11. 2/15/22	Discrete Random Variables	Textbook: Chapter 4
12. 2/17/22	Discrete Random Variables/ Continuous Random Variables Quiz #2	Textbook: Chapters 4-5 Quiz #2 covers Videos 18-21: <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
13. 2/22/22	Continuous Random Variables	Textbook: Chapter 5

14. 2/24/22	Exam #2*	The exam covers the material in Chapters 3-5 in text and Videos 18-21: <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
15. 3/1/22	Normal Distribution	Textbook: Chapter 6
16. 3/3/22	Normal Distribution	Textbook: Chapter 6 Note: March 3 is the last day to withdraw with a grade of a W
17. 3/8/22	Central Limit Theorem Quiz #3	Textbook: Chapter 7 Quiz #3 covers Videos 7-9 <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/

Class	Topics	Chapters/Videos/Assignments
18. 3/10/22	Central Limit Theorem	Textbook: Chapter 7
19. 3/15/22	Confidence Intervals	Textbook: Chapter 8
20. 3/17/22	Confidence Intervals Quiz #4	Textbook: Chapter 8 Quiz #4 covers videos 16-17 and 22-24: <i>Against all Odds</i> https://www.learner.org/series/against-all-odds-inside-statistics/
21. 3/29/22	Exam #3*	The exam covers the material in Chapters 6-8 in text and in Videos 7-9, 16-17 and 22-24: <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/

22. 3/31/22	Hypothesis Testing with One Sample	Textbook: Chapter 9
23. 4/5/22	No Class Meeting	Watch Videos 10-14 and 25-26: <i>Against all Odds</i> https://www.learner.org/series/against-all-odds-inside-statistics/
24. 4/7/22	Hypothesis Testing with One Sample	Textbook: Chapter 9
25. 4/12/22	Hypothesis Testing with One Sample	Textbook: Chapter 9
26. 4/14/22	Linear Regression and Correlation	Textbook: Chapter 13
27. 4/19/22	Linear Regression and Correlation	Textbook: Chapter 13
28. 4/21/22	Linear Regression and Correlation Quiz #5	Textbook: Chapter 13 Quiz #5 covers videos 10-14 and 25-26 <i>Against all Odds: Inside Statistics</i> https://www.learner.org/series/against-all-odds-inside-statistics/
29. 4/26/28	Wrap up class/review day	
30. 4/28/22	Exam #4*	The exam covers the material in Chapters 9 and 13 in text and in Videos 10-14 and 25-26: <i>Against all Odds</i> : https://www.learner.org/series/against-all-odds-inside-statistics/
5/2/22 (Monday)	Take-Home Excel Assignment Due Date	Please email your Excel spreadsheet to me at dboldt@westga.edu
5/10/22 5pm (Tuesday)	Final Exam (Makeup/Optional)	Comprehensive Final (but no questions from the videos)

*The chapters covered on each exam are subject to change. The chapters to be covered on each exam will be announced in class. The scheduled exam and quiz dates will not change unless the university is officially closed on one of those days.

Wolf Pact

Having read the Honor Code for the University of West Georgia, I understand and accept my responsibility to uphold the values described therein and to conduct myself in a manner that will reflect the values of UWG and the Richards College of Business so as to respect the rights of all UWG community members. As a UWG student, I will represent myself truthfully and complete all academic assignments honestly and within the parameters set by my instructor.

I understand and accept that if I am found guilty of violations (through processes due me as a UWG student and outlined in the UWG Student Handbook), penalties will be imposed.

I also recognize that my responsibility includes a willingness to confront members of the UWG community if I feel there has been a violation of the Honor Code.

Ultimately, I will conduct myself in a manner that promotes UWG as the best place to work, learn, and succeed for my generation, and those to come!

About the Richards College of Business

Vision

To become a globally recognized college of business preparing forward-thinking, responsible leaders.

Mission

We are in the business of transforming lives through education, engagement, and experiences.

Strategic Goals and Values

Student Success

Admit quality students and provide them with an education that is rich in experiences and engagement opportunities to prepare them to be effective and ethical professionals.

Academic Success

Recruit, retain and develop faculty and staff by providing sufficient resources to support dynamic and up-to-date bachelor and master-level curricula, to conduct research and other professional activities, and to support engagement with all stakeholders.

Operational Success

Recruit, retain and develop administrative management and staff personnel to manage, develop and support infrastructure and those activities that build internal and external partnerships while working in an ever-changing environment.

Ethical Values

The Richards College of Business community (administrators, faculty, staff, students, and business partners) share a commitment to the principles of honesty and integrity in interactions and undertakings, accountability for personal behavior, and respect for the rights, differences, and dignity of others. In addition, we strive to continuously improve our abilities to recognize unethical behavior and to make ethical and moral decisions.

Institutional Policies

Academic Support

Accessibility Services: Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If a student needs course adaptations or accommodations because of a disability or chronic illness, or if he/she needs to make special arrangements in case the building must be evacuated, the student should notify his/her instructor in writing and provide a copy of his/her Student Accommodations Report (SAR), which is available only from Accessibility Services. Faculty

cannot offer accommodations without timely receipt of the SAR; further, no retroactive accommodations will be given. For more information, please contact [Accessibility Services \(https://www.westga.edu/student-services/counseling/accessibility-services.php\)](https://www.westga.edu/student-services/counseling/accessibility-services.php).

Center for Academic Success: The [Center for Academic Success \(http://www.westga.edu/cas/\)](http://www.westga.edu/cas/) provides services, programs, and opportunities to help all undergraduate students succeed academically. For more information, contact them: 678-839-6280 or cas@westga.edu.

University Writing Center: The [University Writing Center \(https://www.westga.edu/writing/\)](https://www.westga.edu/writing/) assists students with all areas of the writing process. For more information, contact them: 678-839-6513 or writing@westga.edu.

Online Courses

UWG takes students' privacy concerns seriously: technology-enhanced and partially and fully online courses use sites and entities beyond UWG and students have the right to know the privacy policies of these entities. For more information on privacy and accessibility for the most commonly used sites, as well as technology requirements visit the [UWG Online \(https://uwgonline.westga.edu/\)](https://uwgonline.westga.edu/) site.

Students enrolled in online courses can find answers to many of their questions in the [Online/Off-Campus Student Guide \(http://uwgonline.westga.edu/online-student-guide.php\)](http://uwgonline.westga.edu/online-student-guide.php).

If a student is experiencing distress and needs help, please see the resources available at the [UWG Cares \(http://www.westga.edu/UWGCares/\)](http://www.westga.edu/UWGCares/) site. [Online counseling \(https://www.westga.edu/student-services/counseling/index.php\)](https://www.westga.edu/student-services/counseling/index.php) is also available for online students.

Honor Code

At the University of West Georgia, we believe that academic and personal integrity are based upon honesty, trust, fairness, respect, and responsibility. Students at West Georgia assume responsibility for upholding the honor code. West Georgia students pledge to refrain from engaging in acts that do not maintain academic and personal integrity. These include, but are not limited to, plagiarism, cheating, fabrication, aid of academic dishonesty, lying, bribery or threats, and stealing.

The University of West Georgia maintains and monitors a confidential Academic Dishonesty Tracking System. This database collects and reports patterns of repeated student violations across all the Colleges, the Ingram Library, and the School of Nursing. Each incidence of academic dishonesty is subject to review and consideration by the instructor, and is subject to a range of academic penalties including, but not limited to, failing the assignment and/or failing the course. Student conduct sanctions range from verbal warning to suspension or expulsion depending on the magnitude of the offense and/or number of offenses. The incident becomes part of the student's conduct record at UWG.

Additionally, the student is responsible for safeguarding his/her computer account. The student's account and network connection are for his/her individual use. A computer account is to be used only by the person to whom it has been issued. The student is responsible for all actions originating through his/her account or network connection. Students must not impersonate others or misrepresent or conceal their identities in electronic messages and actions. For more information on the University of West Georgia Honor Code, please visit the [Office of Community Standards \(https://www.westga.edu/administration/vpsa/ocs/index.php\)](https://www.westga.edu/administration/vpsa/ocs/index.php) site.

UWG Email Policy

University of West Georgia students are provided a MyUWG e-mail account. The University considers this account to be an official means of communication between the University and the student. The purpose of the official use of the student e-mail account is to provide an effective means of communicating important university related information to UWG students in a timely manner. It is the student's responsibility to check his or her email.

Credit Hour Policy

The University of West Georgia grants one semester hour of credit for work equivalent to a minimum of one hour (50 minutes) of in-class or other direct faculty instruction AND two hours of student work outside of class per week for approximately fifteen weeks. For each course, the course syllabus will document the amount of in-class (or other direct faculty instruction) and out-of-class work required to earn the credit hour(s) assigned to the course. Out-of-class work will include all forms of credit-bearing

activity, including but not limited to assignments, readings, observations, and musical practice. Where available, the university grants academic credit for students who verify via competency-based testing, that they have accomplished the learning outcomes associated with a course that would normally meet the requirements outlined above (e.g. AP credit, CLEP, and departmental exams).

HB 280 (Campus Carry)

UWG follows University System of Georgia (USG) guidance: http://www.usg.edu/hb280/additional_information# (http://www.usg.edu/hb280/additional_information)

You may also visit our website for help with USG Guidance: <https://www.westga.edu/police/campus-carry.php> (<https://www.westga.edu/police/campus-carry.php>)

Mental Health Support

If you or another student find that you are experiencing a mental health issue, free confidential services are available on campus in the [Counseling Center](#). Students who have experienced sexual or domestic violence may receive confidential medical and advocacy services with the Patient Advocates in [Health Services](#). To report a concern anonymously, please go to [UWGcares](#).

ELL Resources

If you are a student having difficulty with English language skills, and / or U.S. culture is not your home culture, specialized resources are available to help you succeed. Please visit the [E.L.L. resource page](#) for more information.

COVID-19

The University System of Georgia recognizes COVID-19 vaccines offer safe, effective protection and urges all students, faculty, staff, and visitors to get vaccinated either on campus or with a local provider. Additionally, everyone is encouraged to wear a mask or face covering while inside campus facilities. The system continues to work closely with the Georgia Department of Public Health to prioritize the health and safety of our campus communities

For the most recent information on coronavirus disease (COVID-19) visit:

- [UWG's Guidance on Face Coverings \(https://www.westga.edu/coronavirus-info/return-to-campus/faq/what-is-the-guidance-on-the-use-of-face-coverings.php\)](https://www.westga.edu/coronavirus-info/return-to-campus/faq/what-is-the-guidance-on-the-use-of-face-coverings.php)
- [Centers for Disease Control and Prevention FAQ \(https://www.cdc.gov/coronavirus/2019-ncov/faq.html\)](https://www.cdc.gov/coronavirus/2019-ncov/faq.html)
- [Georgia Department of Public Health \(https://dph.georgia.gov/\)](https://dph.georgia.gov/)

Additional Items
