STATISTICS II

STATII300 — Statistics II, 3.0 hours

PROFESSOR

Lauren graduated from Marietta College in 2003 with a Bachelor of Science in Mathematics and a minor in Philosophy. She received her Master of Science in 2006 from The University of Akron in Applied Mathematics. During her time at UA, Lauren was a member of the math honorary Pi Mu Epsilon and Women in Mathematics. While completing her Masters research from 2005-2006, she worked as a Statistician at American Greetings in Cleveland, Ohio. From 2006-2011, she completed coursework and research towards a Ph.D. in Engineering Applied Mathematics at The University of Akron. Throughout her time at Akron, she was employed as a Graduate Assistant and taught many courses in the Mathematics department.

From 2011-2013, Lauren was employed as a Visiting Assistant Professor of Mathematics at her undergraduate alma mater, Marietta College. She had the opportunity to teach courses ranging from College Algebra to Differential Equations. In 2013, she decided to make a career change and venture into the insurance industry. She was employed by Farmers Insurance as a Senior Product Analyst until September 2016. After leaving Farmers in late 2016 and after the birth of her daughter, Josie, she decided to return to teaching mathematics at the college level. She taught at Ventura College in Ventura, California during the 2016-2017 school year and was employed full-time as a lecturer at Cuyahoga Community College from 2017-2019. Since the birth of her daughter, Kendall, she has been teaching part-time at various colleges and universities. She recently completed her MBA in Data Analytics from Tiffin University and has been working part-time developing online educational resources in mathematics. She is proficient in various programming languages, mathematical and statistical software, business intelligence software, and is very experienced with MS Excel and Access.

Other than teaching, Lauren's hobbies include yoga, hiking, running, cooking, gardening, and spending time with her daughters and husband.

CONTACT INFORMATION

E-mail: lbrubaker@lakewood.edu
Cell Phone: 800-517-0857 X 723
Address: 2231 N Taylor Rd Cleveland Heights, OH 44112

ONLINE SUPPORT (IT) AND MOODLE NAVIGATION:

All members of the Lakewood College community who use the College's computing, information or communication resources must act responsibly. Support is accessible by calling 1-800-517-0857 option 2 or by emailing info@lakewoodcollege.edu

BOOKS AND RESOURCES

Charles Henry Brase, Corrinne Pellillo Brase. Understandable Statistics: Concepts and Methods. 12th ed. Cengage, 2018.

EVALUATION METHOD

Graded work will receive a numeric score reflecting the quality of performance.
Course Requirement Summary

- **Assignments - Total of 60 Points**
- **Weekly discussion forums-Total of 80 Points**
- **Final Exam - 50 Points**

GRADING SCALE

Graded work will receive a numeric score reflecting the quality of performance as given above in evaluation methods. The maximum number of points a student may earn is 190. To determine the final grade, the student's earned points are divided by 190.

Your overall course grade will be determined according to the following scale:

A = (90% -100%)
B = (80% - 89%)
C = (70% - 79%)
D = (60% - 69%)
F < (Below 60%)

ACADEMIC INTEGRITY/ PLAGIARISM:

Cheating (dishonestly taking the knowledge of another person whether on a test or an assignment and presenting it as your work) and plagiarism (to take and pass off as one's own the ideas or writing of another) are a serious issue. While it is legitimate to talk to others about your assignments and incorporate suggestions, do not let others "write" your assignments in the name of peer review or "borrow" sections or whole assignments written by others. We do get ideas from life experiences and what we read but be careful that you interpret these ideas and make them your own.

I am aware that many types of assignments are available on the internet and will check these sources when there is legitimate suspicion.

Penalty is a zero on the assignment. In cases where there is a major or continuous breach of trust, further discipline, such as an "F" in the course, may be necessary.

The major consequence of any form of cheating is damage to your character and the result of trust and respect.

DISABILITY ACCOMMODATIONS

Students who have a disability and wish to request an academic accommodation should contact Jim Gepperth, the Disabilities Services Coordinator and Academic Dean. The student can request an accommodation at any time although it is encouraged to do so early in the enrollment process. The student should complete an accommodation request form which begins a conversation between the school and the student regarding the nature of their disability and an accommodation that would help the student succeed in their program. The school may request documentation regarding the disability to address the accommodation request effectively. The school will communicate to the student the type of accommodation arranged. This process typically follows a team approach, bringing together persons from the academic department (including the instructor) and personnel from other departments as necessary. Additional information on disability accommodations may be found in the Lakewood University Catalog.

Disability Services Email: disabilityservices@lakewood.edu

SUPPLEMENTAL TEXTS

You can use the following resources to assist you with proper source citation.

American Psychological Association Style Guide- https://www.mylakewoodu.com/pluginfile.php/118179/mod_resource/content/1/APA%20Style%20Guide%207th%20edition.pdf

The Purdue OWL website is also a helpful resource for students. Here is a link to the OWL website: https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

LIBRARY

Mary O'Dell is the Librarian on staff at Lakewood University

She is available by appointment. You can make an appointment with her by emailing her at modell@lakewood.edu or call at 1-800-517-0857 X 730

You may also schedule a meeting at this link: https://my.setmore.com/calendar#monthly/r3a761583354923270/01032020

She can assist you with navigating LIRN, research, citations etc.

SUPPORT

Each student at Lakewood University is assigned a Success Coach. Your Success Coach exists to assist you with academic and supportive services as you navigate your program. They will reach out to you, often, to check-in. Please use the resources they offer.

Student Services is available to assist with technical questions regarding Lakewood University and all services available to you.

1-800-517-0857 option 2
info@lakewood.edu
studentservices@lakewood.edu

CAREER SERVICES

Students are offered Career Services at any point as they journey their academics at Lakewood University.

1-800-517-0857 option 2
careerservices@lakewood.edu

LESSONS

TITLE	COURSE TOPIC	READINGS/ASSIGNMENTS	DUE	OBJECTIVES
Lesson #1	• Estimation	Study Course Syllabus Read Chapters 7.1-7.3 Participate in the Discussion Forum Lesson Evaluation		Objective 1
TITLE	**COURSE TOPIC**	**READINGS/ASSIGNMENTS**	**DUE**	**OBJECTIVES**
Lesson #2	• Hypothesis Testing	Read Chapters 7.4-8.2 Participate in the Discussion Forum Lesson Evaluation		Objective 2

TITLE	COURSE TOPIC	READINGS/ASSIGNMENTS	DUE	OBJECTIVES
Lesson #3	• Hypothesis Testing	Read Chapters 8.3-8.5 Participate in the Discussion Forum Complete Assignment 1 Lesson Evaluation	Assignment 1 upon completion of the lesson	Objective 3
Lesson #4	• Correlation and Regression	Read Chapters 9.1-9.3 Participate in the Discussion Forum Lesson Evaluation		Objective 4
Lesson #5	• Chi-Square and F Distributions	Read Chapters 9.4-10.2 Participate in the Discussion Forum Complete Assignment 2 Lesson Evaluation	Assignment 2 upon completion of the lesson	Objective 5
Lesson #6	• Chi-Square and F Distributions	Read Chapters 10.3-10.5 Participate in the Discussion Forum Lesson Evaluation		Objective 6
Lesson #7	• Nonparametric Statistics	Read Chapters 10.6-11.2 Participate in the Discussion Forum Complete Assignment 3 Lesson Evaluation	Assignment 3 upon completion of the lesson	Objective 7
Lesson #8	• Nonparametric Statistics	Read Chapter 11.3-11.4 Participate in the Discussion Forum Complete the Final Exam Request the Next Course Lesson Evaluation THANKS FOR A GREAT CLASS	Final exam upon completion of the lesson	

DESCRIPTION

This course will give you an advance knowledge of business statistics so that you can make future decisions. You will get an advance understanding of different types of hypothesis testing methods including the use of different types of probability distribution charts.

OBJECTIVES

1. **Estimating population mean using tools such as critical values and degrees of freedom, and estimating probability of success in a binomial distribution**
2. **Comparing populations by their differences in population mean and proportions, and using an understanding of statistical tests and hypothesis testing to test the mean**

3. **Applying hypothesis testing to test proportions, differences in population mean and proportions, and tests involving paired differences**
4. **Computing values such as a sample correlation coefficient, equations for least-squares lines, and coefficient of determination, and using hypothesis testing to test values like this to determine the linear line of best fit for a set of data**
5. **Running multiple linear regression to determine how a response variable is affected by multiple explanatory variables, and applying chi-squared distributions in hypothesis testing to different situations**
6. **Applying chi-squared distributions to test single variance, estimate p values, and compute confidence intervals, applying F distributions to estimate p values, and setting up a one-way ANOVA test to compare sample means**
7. **Learning about how to conduct a two-way ANOVA test, and completing and interpreting results for a matched pair sign test and a rank-sum test**
8. **Computing and interpreting the Spearman rank correlation coefficient, using hypothesis testing for testing significance, and running tests to test a sequence for randomness**