Syllabus
MAT203
Introduction To Statistics

Instructor	Taylor Belcher, MA Associate Lecturer
Contact Info	*Email*: tbelcher@coker.edu *Phone*: 843-383-3900 x3969
Communication	Email is absolutely the best way to get in touch with me. I can solve most problems via email and I prefer that you contact me that way. I will respond to an email within 24 hours, except on weekends. Please give me at least that time before you send a second email. Class announcements from me will be made through the Coker email system and Blackboard. It is the responsibility of the student to check their Coker email and Blackboard regularly for important updates**.**
Required Materials	*Computer and Internet Access* - A computer (laptop or desktop) with reliable internet access is required to complete this class. Please do not try to complete this course on your phone. *eBook and WebAssign Homework Platform* - We will use a free, open source text in this class and WebAssign for homework and tests. Access to WebAssign is offered through RedShelf and charged directly to your tuition. Required and graded assignments are hosted on WebAssign. You will not be able to complete the course without WebAssign. *Google Sheets* - You can use Google Sheets as a free calculator for all statistical calculations in this course. The link has a guide for common functions you will need for this course. You do not need to buy a calculator. In fact, I recommend against it for this course.
Course Format	This is an online, asynchronous course. This means that course materials (lecture videos, reading, homework, tests, etc) will be available on Blackboard and WebAssign for students to complete on their own schedule by set deadlines. There are no live class meetings, but the instructor is available via email whenever you have a question. Submitting assignments by the deadline will be considered equivalent to attendance in a traditional in-person course.

Text

Introductory Statistics, published for free by OpenStax: https://openstax.org/details/books/introductory-statistics

OpenStax is a non-profit organization committed to improving student access to quality learning materials. Their free textbooks are developed and peer-reviewed by educators to ensure they are readable, accurate, and meet the scope and sequence requirements of modern college courses.

RedShelf

WebAssign is offered through Redshelf. There is a class fee attached to your tuition to pay for WebAssign access. You do have the ability to opt out of using Redshelf to purchase once you click on the class material link and choose that you wish to purchase course materials on your own. You can opt out and back in as many times as you wish. When you opt out, the class fee is removed from your student account. If you opt back in, it is added back to your account. WebAssign is a required tool for this class. Please note that opting out of Redshelf means you would still need to purchase WebAssign on your own. This is not recommended. Here is a Redshelf tutorial video with more information: https://solve.redshelf.com/hc/en-us/articles/360007589114-Blackboard-student-journey-

Recommended Calculator

Google Sheets (https://docs.google.com/spreadsheets/)

A list of example commands for Google Sheets that you would need for stats can be found here: https://docs.google.com/spreadsheets/d/1ZKe77OhpRaR81ajERuL_edZ166RHUpIjrArJH47Eyw8/edit?usp=sharing

All of the above calculator resources are free to use. You do not have to purchase a handheld calculator, and I recommend against it. There are better computer tools and programs for the job.

Course Description

This course meets the Coker College Intellectual Core requirement for mathematics. During this course, students will be introduced to standard statistical analysis techniques and apply them to authentic problems. A wide variety of applications are included in the course in areas such as quality control, engineering, education, social sciences, biological sciences, psychology, sports, physics, environmental studies, and so on. Both theoretical and application approaches will be used.

Learning Objectives

By the end of this course, students should be able to:

1. Formulate questions that can be addressed with data and then collect, organize, and display relevant data to answer these questions.
2. Meaningfully describe real sets of data
3. Understand and apply the basic concepts of probability
4. Select and use appropriate statistical methods to analyze data
5. Develop and evaluate inferences and predictions that are based on data
6. Use appropriate technology and procedures for statistical processes
7. Describe coherently the meaning of a statistical test in terms of practical application
8. Evaluate the validity of assumptions behind a statistical test

Core Skills Learning Outcome

Analytical Thinking - Students organize evidence and synthesize insightful patterns, similarities, and differences related to the course focus

QEP

The Quantitative Literacy QEP seeks to develop quantitatively literate students and create a campus culture of cross-disciplinary scholarship where mathematics and numerical reasoning are widely used tools for investigation and problem solving. Coker College students will improve their mathematical proficiency, and will understand the application of quantitative reasoning within their programs.

Grading

Your final grade will be determined using the following breakdown:
25% Homework, 25% Quizzes, 25% Tests, 25% Final Exam

The final letter grade will be on a traditional 10-point scale.

Use of Technology

This course will require students to input, display, organize, and process data using software.

Extra Credit

One extra credit assignment will be offered in this course. You will be given a list of statistics books to choose from, read, and then critique. No other extra credit will be offered and there is no curve. Please do not ask.

Late Work Policy

Late work will not be accepted. Please turn in your work on time.
Modules will include a soft due date and a hard due date.
Soft due dates are recommended pacing and it is okay to miss one, hard due dates are the deadlines and you must work around them. If a student has an extreme life circumstance that prevents them from completing their work, they should email the instructor to discuss it.

Accommodations

Any student with a disability requiring accommodations in this course should send me an email to discuss plans for meeting those accommodations. In addition, students should contact Robin Richardson in Learning Support Services, located in LITC.

Honor Code

Each student is responsible for upholding the Coker College Student Covenant, agreeing to:

- Conduct myself with integrity and be responsible for my actions and their consequences.
- Respect the rights, property, culture, and beliefs of others.
- Engage myself as an honorable scholar inside and outside of the classroom.
- Hold myself and others accountable for the sustainability of our environment.
- Offer my knowledge and creativity to serve my community.
- Contribute to the wider world through a continued pursuit of knowledge.

Students suspected of violating these standards will be reported to the Dean of students, the Provost, and the Academic Standards Committee. Additional appropriate actions that may be taken include reducing the assignment or exam score to 0. Specifically, students are prohibited from using external resources during examinations (i.e. internet, classmates), and plagiarizing written assignments.

Course Topics

This course will work through OpenStax's Introduction to Statistics and cover the standard basic material.

Chapter 1: Sampling and Data
Chapter 2: Descriptive Statistics
Chapter 3: Probability Topics
Chapter 4: Discrete Random Variables
Chapter 5: Continuous Random Variables
Chapter 6: The Normal Distribution
Chapter 7: Central Limit Theorem
Chapter 8: Confidence Intervals
Chapter 9: Hypothesis Testing with One Sample
Chapter 10: Hypothesis Testing with Two Samples
Chapter 11: Chi-Square Distribution
Chapter 12: Linear Regression and Correlation

Course Schedule

Week 1: Syllabus, Orientation, Chapter 1
Week 2: Chapters 2-3
Week 3: Chapters 4-5
Week 4: Chapters 6-7
Week 5: Chapter 8, Midterm
Week 6: Chapters 9-10
Week 7: Chapter 11-12
Week 8: Review, Final Exam

Notice that because we only have 8 weeks for the course, you need to average a two-chapters-per-week pace**.** Each module in Blackboard will have soft due dates and hard due dates**.** Soft due dates are recommended pacing and it is okay (but not recommended) to miss one. Hard due dates are the deadlines and you must work around them.

Disclaimer

It is your responsibility to read and understand the instructor, department, and university policies in this syllabus. Please email me if you have a question about anything in the document.

Title IX

As a recipient of Federal Funds, Coker University is required to comply with Title IX legislation, which prohibits discrimination on the basis of sex in educational programs or activities, admission, and employment.

Coker's Commitment to Equality Equal access to educational experiences is an important part of the Coker experience. If you feel you have been discriminated against based on your sex, gender, gender identity/expression, or sexual orientation, or if you have experienced sexual harassment, misconduct, or violence, we encourage you to report this to a member of the Coker Community.

What is Sexual Harassment? Sexual harassment is unwelcome conduct of a sexual nature, including unwelcome sexual advances and requests for sexual favors. Sexual violence is a form of sexual harassment and includes sexual assault, dating violence, domestic violence, rape, sexual battery, sexual coercion, and sexual exploitation.

Who Can I Talk to? While faculty and staff are happy to listen to your concerns, please be mindful of how much you wish to disclose since all Coker faculty and staff members are 'mandatory reporters.' This means that if they are made aware of potential discrimination, harassment, misconduct, or violence that has occurred involving any Coker student, staff, or faculty member, they are required by law to report it to Coker's Title IX Officer. This includes incidents that occur on campus or at an off-campus Coker-sponsored event or activity in the recent present or in the past. Of course, you may also contact Coker University's Title IX Coordinator, Michael Williamson Student Center, 2nd floor, mwilliamson@coker.edu, 843-383-8194 directly. At any time that you fear for your immediate safety, contact Campus Safety (843-383-8140) or dial 911.

Confidential Reporting If you wish to talk with someone who is better able to keep your information confidential, please visit or call Coker's Center for Health and Wellness (843-917-4044).

Additional information is located under the Title IX section on the Coker website:
https://www.coker.edu/about-coker/offices-services/campus-safety/title-ix/