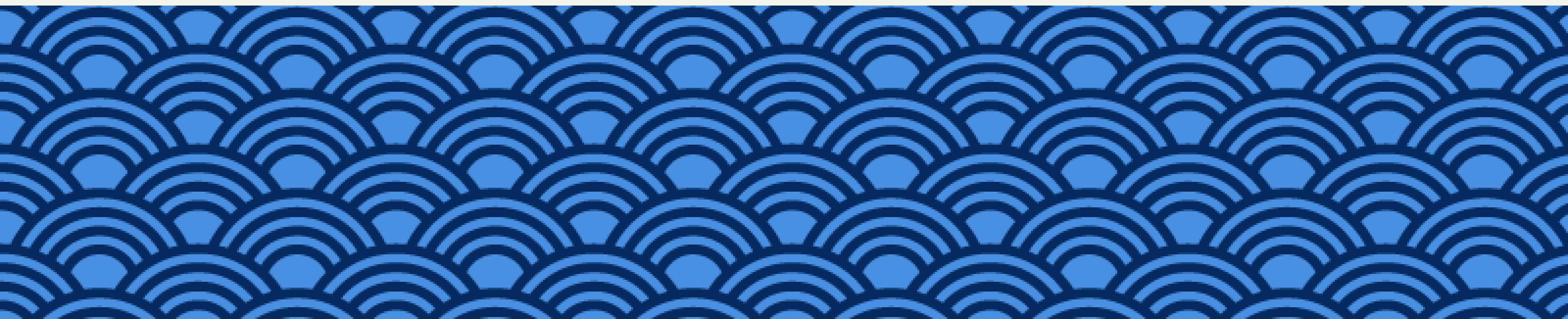


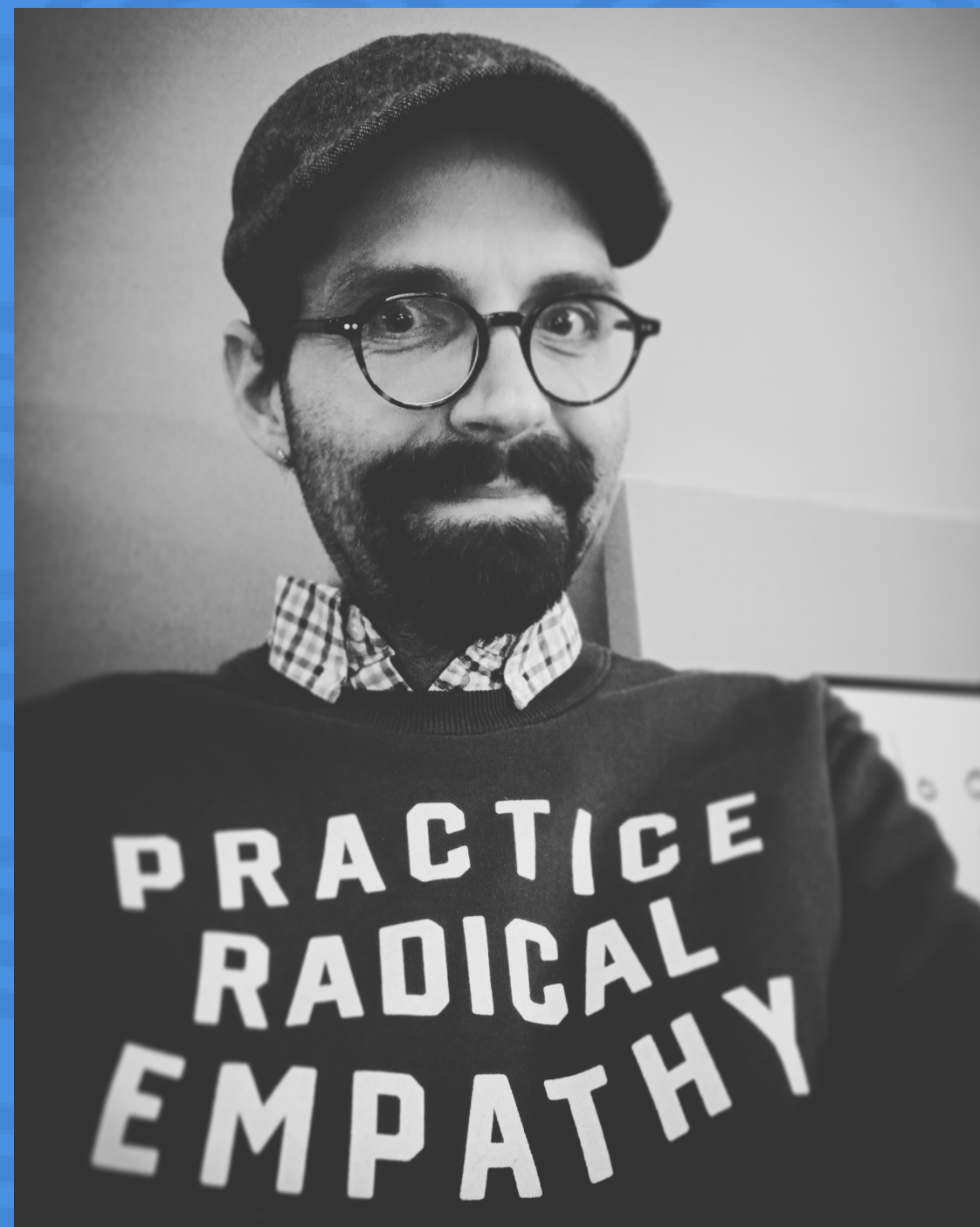
Spring 2023

Statistical Analysis of Social Data

SOC 3630



Professor:



Dr. Michael Gillespie (he / him / his)

Professor of Sociology
Director of Faculty Development and Innovation

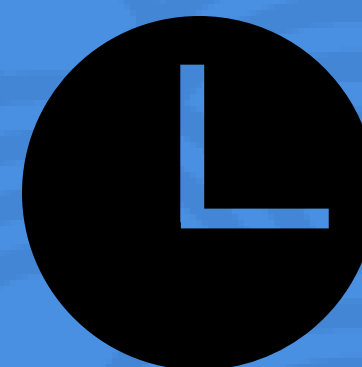
Contact Me



3139 Blair Hall
1116 Booth Library



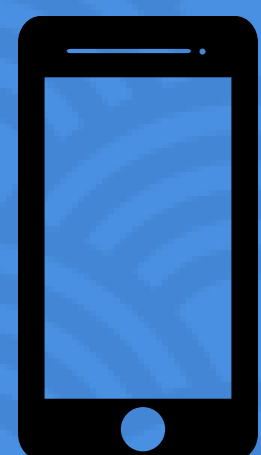
mgillespie@eiu.edu



Office Hours:

W & F: 830a - 945a (Blair)

R: 2:00p - 3:30p (Booth)



734-717-0901



[@_@eiuprofg](https://twitter.com/_@eiuprofg)



Course Description

This course is designed to introduce students to the methods that sociologists, social workers, criminologists, and other social scientists use to summarize and analyze relationships in numerical social data. Social scientists study the social world through responses to surveys, census demographic indicators, and rates and counts of social behavior (e.g., crime, unemployment, and welfare data). We also use similar data to study aggregate units of analysis such as nations, states, counties, and cities.

As a student in this course, you will create, analyze, and communicate common descriptive and inferential statistics including frequency distributions, graphical presentations of data, measures of central tendency and variation, sampling distributions, estimation procedures, and basic hypothesis tests in Microsoft Excel.

Hybrid Design

This course utilizes a hybrid design: course lectures are delivered in-person on Monday, Wednesdays, and Fridays from 10a to 10:50a; no lectures will be recorded or available.

Lab and applied components are asynchronous and [available on D2L](#)

Effort and Opportunity!



Attitude is everything! Saying that,

**"I'm not good
at math!"**

is self-limiting.

It's an excuse orientation not a
opportunity orientation!



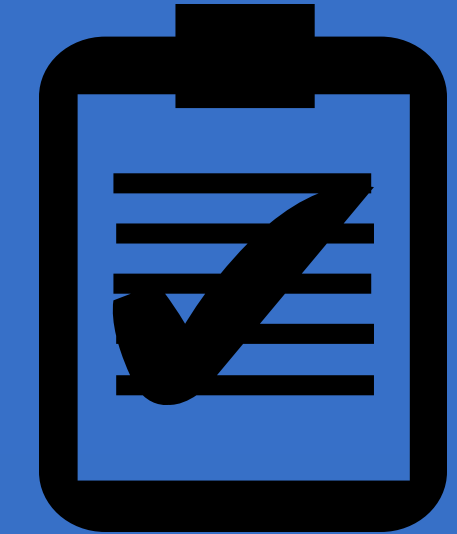
effort > ability

I have no doubt that you can and will be successful in this course as long as you focus on your best honest effort and not worry about your 'grade'. Bring an attitude of opportunity to this experience to learn, and you'll realize this is not a math class.



Course Resources

All linked in D2L



Statistical Literacy Mobile App:

- I have developed a mobile app for this course to be used as a guide for key terms and concepts, links to course resources, polls, and other goodies.

Go to this link on your smart phone: <https://statliteracy.glideapp.io/> or scan the QR code above.

The main text is "The Tao of Statistics" by Dana K. Keller

Other readings (linked in D2L):

- Best, J. (2012). Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists (Updated ed). Berkeley, CA: University of California Press.
- Martinrogers, N., Rausch, E., & Mattessich, P. (2009). Communities that Don't Bowl in the Fog. Contexts, 8(1), 26–31.
- Wheelan, C. (2013). Naked Statistics: Stripping the Dread from the Data. New York: W.W. Norton.

I recommend the use of the Brightspace Pulse app for your mobile devices to stay up to date with your online materials, announcements, and feedback.

The Adobe Scan app allows for you to scan your hand-written work with your phone and convert it automatically to a PDF document.

Course Learning Objectives

Through this course, students will be able to:



CO 1: Identify key concepts of descriptive statistics

CO 2: Identify key concepts of inferential statistics



CO 3: Execute computational skills using Excel to manage and analyze data

CO 4: Perform calculations of descriptive and inferential statistics by hand and with Excel



CO 5: Apply critical thinking and problem-solving skills using quantitative information

CO 6: Integrate quantitative reasoning and statistical literacy to apply a critical perspective on the widespread use of statistical information in society

Learning Activities



Student Self-Assessment Quizzes (CO 1, CO 2)

Weekly self-assessment activities in D2L
14 assessments, 10 points each, 140 total points

Self-assessment is a key component to engaged learning! Each learner will be evaluated on their responses to weekly self-assessment quizzes. Learners will be allowed unlimited attempts to each quiz, but the score of the first attempt is recorded.

Quizzes will be posted each Friday at 11am, after the final lecture of the week, and will be expected to be completed by 10am the following Monday before the first lecture of the week.

Learners may use their course reading materials and notes to complete these assessments.

These self-assessments are timed – learners will have one hour to complete each assessment.

Learning Activities



Excel Exercises (CO 3, CO 4)

Activities to reproduce Excel data outcomes and perform statistical analyses

10 Exercises, 15 points each, 150 total points

Learners will be assessed on their completion of a series of Excel exercises. These exercises are designed for students to compute statistical data and identify outcomes of their analyses.

To complete these exercises students will watch a video demonstration from the Excel Video Guidebook (on D2L), follow detailed directions in the exercise explainer document, produce the required output, and answer questions by entering data on an exercise quiz in D2L. Completed Excel workbooks will be submitted via the Dropbox on D2L.

Successful learners will produce Excel output, respond to data quizzes, and submit complete workbooks that meet the learning objectives of each exercise.

Learning Activities



A Applied Analysis Projects (CO 5, CO 6)

Written projects incorporating, key concepts, data analysis, social science phenomena, and critical thinking

3 assessments, 25 points, 35 points, and 50 points; 110 total points

Applied analysis projects will assess how learners execute data analyses in Excel, interpret statistical information, and write a complete analysis.

Separate project guides will be posted in D2L.

Project 1: Race and Exonerations (25 points, due March 10, 2023)

Project 2: Implicit Biases (35 points, due April 10, 2023)

Project 3: Student Anxiety and Mental Health (50 points, due May 3, 2023)

Levels of Evaluation for Excel Exercises and Applied Analysis Projects

0

Incomplete

Project is not submitted or
submitted with substantial
components missing

1

'Not Yet'

Project is completed but requires
more time and attention

Required revision within 48 hours for partial points

2

'Developing'

Project completed with some areas
for growth

Optional revision within 48 hours for partial points

3

'Understanding'

Project completed and
demonstrated a working
understanding of the material

Final submission



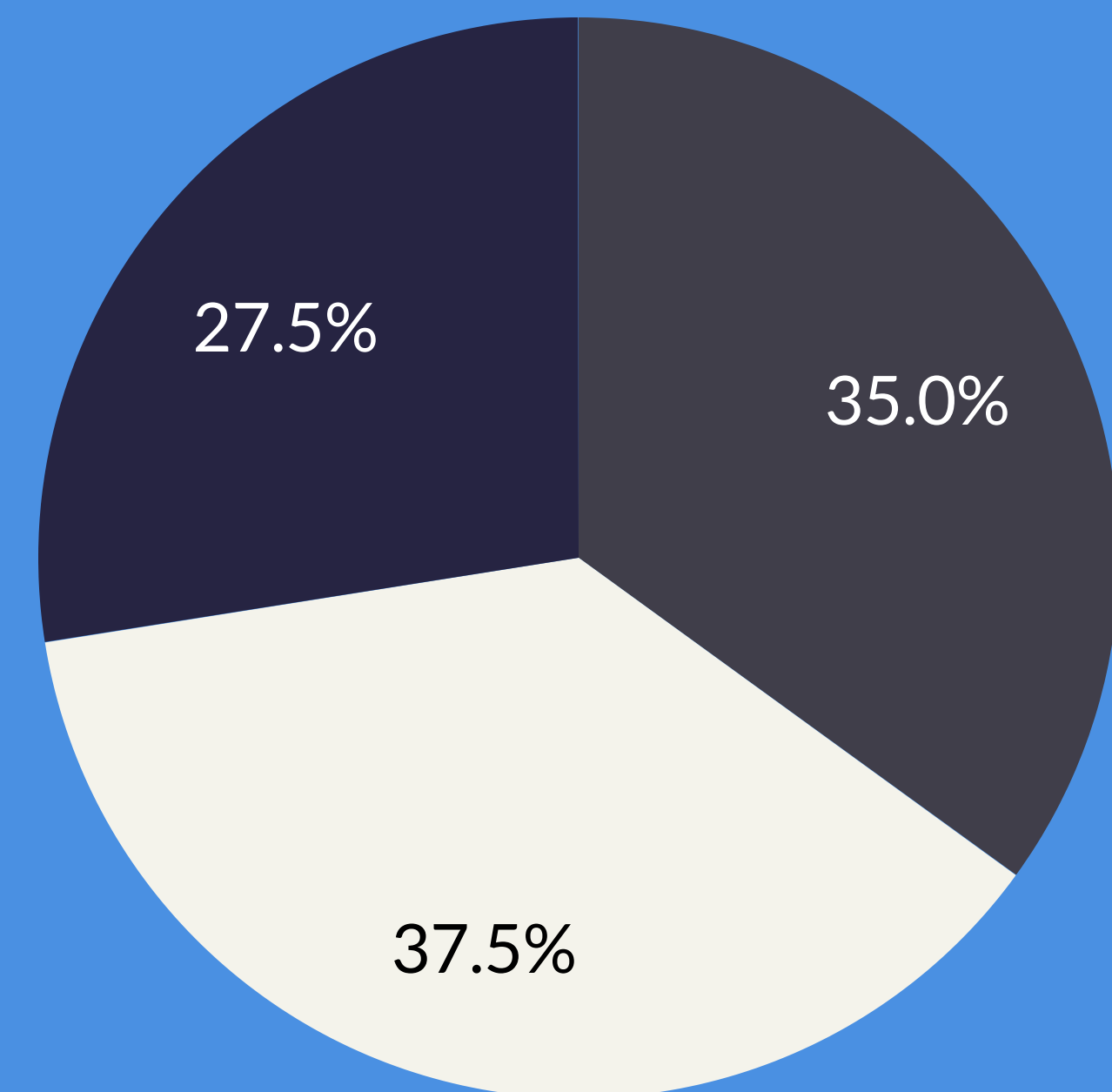


Life happens. It is a fact of life, really! Therefore, I grant each student 5 tokens that can be redeemed when, well, life happens.

Perhaps you will need them, perhaps not. But if you need an extra day for an Excel Exercise or Applied Analysis Project, or have to miss lecture, use a token.

You still must complete the work, but if life happens, let me know ***ahead of the due date*** or the lecture period, and turn in a token. That's it.

Distribution of Evaluation Points

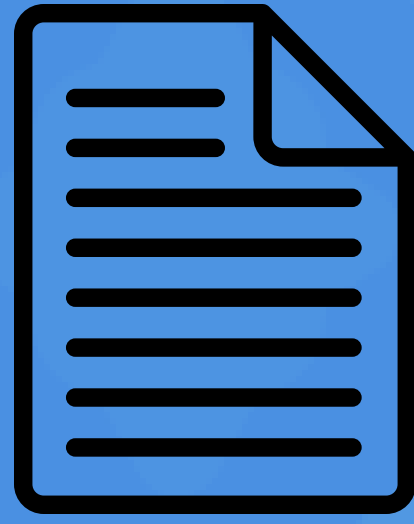


- Self-Assessment Quizzes (35%)
- Excel Exercises (37.5%)
- Applied Analysis Projects (27.5%)

I will take attendance each lecture period. If you have 5 or fewer absences throughout the semester, you have earned the "Course Engagement" badge.

The Course Engagement badge means that your lowest Excel Exercise grade will automatically be dropped and you will be given all 15 points for the exercise.





Units, Topics, and Dates

Unit 1

Introduction

January 9 - 13

Unit 2

Basic Descriptive Statistics

January 18-20

Unit 3

Measures of Central Tendency

January 23-27

Unit 4

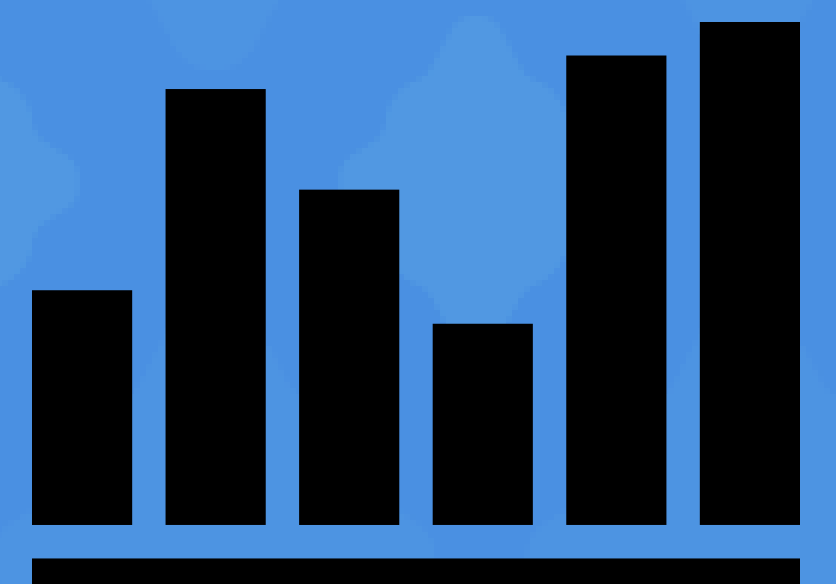
Measures of Variability

January 30 - February 10

Unit 5

The Normal Distribution

February 13 - 24



Units, Topics, and Dates, cont.

Unit 6

Samples,
Sampling
and Risk

February 27 - March 24

Unit 7

Hypothesis
Testing

March 27 - April 14

Unit 8

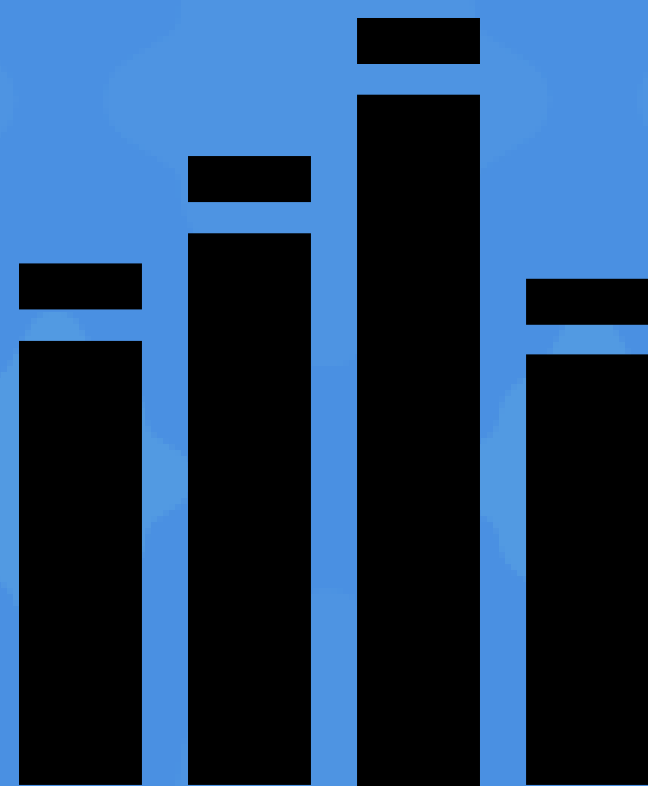
Analysis of
Variance

April 17 - 21

Unit 9

Real World
Research

April 24 - 28



Student Performance Expectations

BE DILIGENT

You are expected to work hard in this course and should expect to put in plenty of work time outside of the classroom.

BE ENGAGED

Engagement is your continued and productive attendance, use of learning activities as opportunities to learn, and mindful participation in active learning.

BE PROACTIVE

Statistics is not a subject that is learned without practice and help. Do not be afraid to ask for help or come see me during my student office hours – I am more than willing to go the extra mile, but only if you are, too.

ASK. ASK. ASK.

Ask for help: There is NO SUCH THING AS A STUPID QUESTION!

Important Information!

Academic Integrity:

Students are expected to maintain principles of academic integrity and conduct as defined in EIU's Code of Conduct. Violations will be reported to the Office of Student Standards.

Students with disabilities:

If you are a student with a documented disability in need of accommodations to fully participate in this class, please contact the Office of Student Disability Services (OSDS). All accommodations must be approved through OSDS. Please follow this link for more information on how to be registered with their office. Please stop by McAfee Gym, Room 1265, or call 217-581-6583 to make an appointment. You may also email acjackson3@eiu.edu for more information.

The Student Success Center:

Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Student Success Center provides individualized consultations. To make an appointment, call 217-581-6696, or go to McAfee Gym, Room 1301.

Student Wellbeing!!!

EIU is committed to supporting and advancing the mental health and well-being of our students. Students may experience stressors that can impact both their academic experience and their personal mental health and well-being. These may include academic pressure and challenges associated with relationships, anxiety, depression, alcohol or other drugs, identities, and finances. If you are experiencing concerns, seeking help is a courageous thing to do for yourself and those who care about you. Below is a list of available campus resources to assist with student well-being:

- [EIU Counseling Clinic](#): Human Services Building, 1st floor; 217-581-3413; for after-hours urgent support, call 1-866-567-2400. The Counseling Clinic offers individual and group counseling and emergency services.
- [Online Mental Health Screening](#): online, private screening tool for depression, anxiety, eating disorders, and alcohol and substance misuse.
- [EIU Health Clinic](#): Human Services Building, 1st floor; 217-581-3013. The Health Clinic services include lab work, pharmacy, and women's health and men's health programs.
- [Health Education Resource Center \(HERC\)](#): 2201 Blair Hall; 217-581-7786. The HERC offers health programming in the areas of alcohol, tobacco and other drug prevention and education, flu and cold prevention and education, nutritional analysis and education, and sexual health education, in addition to other health-related topics.
- [Center for Gender and Sexual Diversity \(GSD\)](#): Stevenson Hall, lower level; 217-581-7117. The GSD Center provides services such as the Trans*formation Station, a large library full of books and movies, year-round programming, and a comprehensive Safe Zone Training program.
- [EIU Campus Food Pantry](#): 1347 McAfee. The EIU Campus Food Pantry is a means to support students and the campus community by alleviating barriers to consistent, adequate, and healthful food. Anyone with a Panther Card can visit the pantry two times per month.
- [Student Legal Service](#): MLK Jr University Union Room 2420; 217-581-6054. Student Legal Service can assist with off-campus housing issues, traffic violations, misdemeanor criminal offenses, municipal ordinance violations, and expungement.

More Good Stuff!

Booth Library:

Booth Library is the best place to do research, find expert help, or study in a calm, distraction-free environment. The library provides online access to books, high quality e-books, scholarly articles, and research that you cannot find in a Google search. Get expert help with your assignments by contacting the Booth Library Research Help Librarians. Visit, call 581-6072, or go to <http://booth.eiu.edu/ask> to connect with a librarian. Stop by the Research Help desk or go to <http://library.eiu.edu> to explore library resources or search the library directly from D2L.

Writing Center:

I encourage you to use EIU's Writing Center located at 3110 Coleman Hall. This free service provides one-to-one conferences with writing center consultants who can help you with brainstorming, organizing, developing support, documenting your papers, and working with sentence-level concerns. The writing center is open to help any student from any major at any stage of their writing process, and its system of one-to-one conferences demonstrates value and respect for individual writers, all of whom can benefit from feedback about their works in progress. Visit <https://www.eiu.edu/writing/> for more information and hours of operation.

Technology Resources:

The Center for Student Innovation (CSI) is located on the lower level of Booth Library, in the Atrium. Technology is available for checkout for students with a valid Panther Card. Items available include laptop computers, Wi-Fi hotspots, digital camera kits, webcams and speakers, and a sewing machine, all for limited checkout periods. Other items for use in the CSI (but not for checkout) include podcast equipment, 3D printers, a Cricut cutting machine, and virtual reality (VR) equipment.

Contact the CSI by email at csi@eiu.edu or call 217-581-6073.

Technical Support Help for Students:

Contact: EIU User Services Phone: 217-581-4357 Email: support@eiu.edu

D2L Brightspace Support (provided by D2L)

Phone: 1-877-325-7778 (toll free) Email: [Click here](#) to submit an issue via email.

Note: D2L provides support for USING D2L Brightspace only. For login and other issues, contact EIU User Services listed above.

[D2L Brightspace Tutorials for Students](#)