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“When you have mastered numbers, you will in fact no longer be reading numbers, any more than you read words when reading books. You will be reading meanings.”

~W. E. B. Du Bois

### **The Online Classroom Experience:**

I am aware that students access, engage, and interact with online course materials and activities with different levels of comfort and technological capabilities. I also understand that the best mode of delivery for this course is in a traditional face-to-face format. Neither you nor I chose these circumstances, and I am committed to ensuring that you are able to perform to your potential this semester. If your ability to engage with this course is due to barriers created by inadequate access to, or condition of, proper technology, please contact me as soon as possible. It is my aim to ensure that there are no undue barriers or burdens to your success.

**Students:** As an online class, I encourage my students to take an active role. Your attitude can help determine your success in this online experience. I challenge you to be open-minded, self-motivated, accepting of critical thinking, willing to work collaboratively, and trusting of the online experience. Good written communication skills and a minimum level of technological experience with Microsoft Office and D2L are expected; access to a device equipped with a web camera and microphone is also preferred. Finally, I strongly encourage you to commit the time necessary (six to eight hours per week) to stay current with the course content.

**Professor:** I assume the responsibilities to appropriately design the content and facilitate the pace of the course. Online instruction is not "face-to-face gone digital, audio or video." Interaction between students, between myself and my students, and between the students and the learning materials is my focus. Online, my role is not as a "distributor of information" rather my energy is as the agent whereby the discovery of learning is facilitated in a student-centered environment. I commit to be your guide through the course as you actively participate in the discovery, synthesis, and contributions to the learning material.

#### ➤ **One-on-One Conferences**

I am requesting that each student virtually meet with me every week. Because this course is asynchronous without virtual, real time course meetings, I am asking that each student touch-base with my on a weekly basis. The purpose of these conferences is to create a space where you can get one-on-one time to ask questions, receive feedback on your work, and clarify concepts from the course material.

Meetings will take place through our Microsoft Teams course page where I will be conducting my office hours. If my office hours are not scheduled at a time that fits in your schedule, please let me know so we can set-up a schedule at an appropriate time. I am also open to holding these meetings over the phone as well. I will make it as easy for you as possible.

## COURSE DESCRIPTION AND OBJECTIVES:

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.

This course assumes that each student is – on the first day of class – anxious and not seeking to become a professional statistician. Rather, this course is designed to help sociology students develop a critical statistical literacy. Fundamentally, you are here to learn how statistics are an essential, unavoidable part of our society (and with which you *must* come to some inner-peace).

People who acquire statistical literacy hold a key characteristic of citizenship. The media, politicians, advocates of social causes, and other groups combine social statistics with textual information to promote and/or justify some social action or cause. To become a critical consumer of statistics, each student will develop a working knowledge of how statistics are generated (computational and applied methods) as well as how “statistics” is a language to communicate certain, purposeful information, and a worldview through which human social relationships are *best* understood.

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.

## Eastern Illinois University Learning Goals and Course Objectives:

### Critical Thinking:

- Seeking and gathering data, information, and knowledge from experience, texts, graphics, and media (CT-2).
  - *Read and analyze statistical information produced by other social researchers*
- Understanding, interpreting, and critiquing relevant data, information, and knowledge (CT-3).
  - *Confront anxieties and fears of critically reading, writing, and thinking with numbers*
- Synthesizing and integrating data, information, and knowledge to infer and create new insight (CT-4).
  - *Improve critical thinking and problem solving skills using quantitative information*

### Quantitative Reasoning:

- Performing basic calculations and measurements (QR-1).
  - *Confront anxieties and fears of generating and working with numbers*
- Applying quantitative methods and using the resulting evidence to solve problems (QR-2).
  - *Improve critical thinking and problem solving skills using quantitative information*
- Reading, interpreting, and constructing tables, graphs, charts, and other representations of quantitative material (QR-3).

- *Develop competence in reading and using graphs and charts to summarize numerical data*
- Critically evaluating quantitative methodologies and data (QR-4).
  - *Develop competence in reading and using graphs and charts to summarize numerical data*
- Constructing cogent arguments utilizing quantitative material (QR-5).
  - *Develop competence in interpreting descriptive and inferential statistics*
- Using appropriate technology to collect, analyze, and produce quantitative materials (QR-6).
  - *Enhance computer skills by using SPSS to manage and analyze data*
  - *Develop competence in calculating descriptive and inferential statistics by hand and with SPSS*

#### Writing and Critical Reading:

- Creating documents appropriate for specific audiences, purposes, genres, disciplines, and professions (WRC-1).
  - *Develop communication and literacy of statistics in order to develop a critical perspective on the widespread use of statistical information in society*
- Crafting cogent and defensible applications, analyses, evaluations, and arguments about problems, ideas, and issues (WRC-2).
  - *Present research results in multiple ways (words, graphics, and tables)*
  - *Write about data and statistical test results in an appropriate manner*

#### SUPPORTING TEXTS:

Healey, Joseph F. 2016. *The Essentials of Statistics: A Tool for Social Research*. 4<sup>th</sup> ed. Boston, MA: Cengage. Available from Textbook Rental Services

Keller, Dana K. (2016). *The Tao of Statistics: A Path to Understanding (With No Math)*. 2d. ed. Thousand Oaks, CA: Sage. Available on D2L

*"A Guide for Statistical Literacy: Technical Concepts and Applications" posted on the course D2L site*

#### Additional Applied Required Readings:

An applied reading taken from current media reports, or from a social or political institution, will be posted periodically for use in lecture and/or lab. They are not listed here because they are selected a week or two ahead of time to ensure they are timely and relevant.

#### COURSE CALENDAR:

The general course schedule follows this information in the syllabus; the **updated and official course schedule** is on Desire2Learn (D2L).

#### ADDITIONAL REQUIRED ITEMS:

1. A Scientific Calculator (DO NOT USE A "GRAPHING" CALCULATOR)
  - a. *Real Calculators are the best option, but the calculator app on your cell phones or smart phone is acceptable. You will be spending a lot of time calculating, so please make sure you have a device that you are comfortable with!*

2. Access and use of SPSS

The best way to access SPSS is through the EIU Virtual Desktop (<https://view.eiu.edu/>) on Chrome or Firefox and then select VMware Horizon HTML Access. You could also download the VMware Horizon Client on the left hand option and have access without a web browser. Log-in with your EIU credentials and you will have access to the virtual desktop just like you were at a computer lab on campus.

SPSS is also available in various places around campus including the Gregg Technology Center and Math Labs in Old Main. Campus public computing sites, such as Booth Library also have SPSS software for your use.

3. Access and knowledge of D2L is important for course announcements, lecture materials, lab and homework assignments, and grade feedback. Additional materials, if available, will be posted prior to each class session.

I recommend the use of the Brightspace Pulse [app](#) for your mobile devices to stay up-to-date with your online materials and courses.

### **COURSE REQUIREMENTS: 775 TOTAL POINTS**

#### **Graded Requirements:**

##### ***Weekly Homework Lab Assignments (14 assignments, 50 points each, 700 total):***

Each student will complete a series of lab assignments. Every assignment will be posted on D2L each Tuesday morning at 10am. The lab is due *no later than* the following Monday **at 10:00a submitted via the Dropbox on D2L.**

##### ***Cumulative Lab Assignment / Paper Option (75 points):***

Statistics is a cumulative process, the lab assignment / paper option is cumulative as well. The final assignment will be in the format of a traditional multiple choice questionnaire and a 'lab'-style applied assignment. It will be administered via D2L the week of final exams, December 14-18, 2020, and submitted through Dropbox.

Student can also opt to write an analysis paper in lieu of completing the final lab assignment. This paper, a complete statistical analysis covering the breadth of the course, is meant to cater to those student who are more comfortable with writing papers. Either option will cover similar material, but the demonstration of the mastery of the material is different. Information pertaining to both options will be made available in November prior to the Thanksgiving break.

##### ***The B.O.S.S. Extra Credit (5-10 extra credit points)***

The B.O.S.S. is the **B**ureau **o**f **S**tatistical **S**ignificance, the formal organization of statistical awesomeness. The group occasionally releases interesting and quirky statistical challenges and I like to share these with students. Two or three times during the semester, such a challenging problem, question, or curiosity will be posted in the B.O.S.S. module on D2L. If accepted, each student has the opportunity to attempt to earn extra credit. When opportunities are posted, they will be announced in the News feed in D2L; they are *extra credit options and not required*.

**Based on the requirements, there are 775 points to be earned in this course:**

Requirement:	Points
Weekly Lab Assignments	700 Total points
Final Lab / Paper	75 points
<i>Total</i>	<b>775 Total</b>

Final letter grades are based on the following scale:

A (90% or higher)	697-775 points
B (80-89%)	620-696 points
C (70-79%)	542-619 points
D (60-69%)	465-541 points
F (less than 60%)	< 465 points

**Be advised**, this course is part of the departmental core, those courses required of students who major in sociology and/or criminal justice.

At any moment in the semester, you can gauge your progress in the course by tracking your grades on D2L. Take the total amount of points you have earned and divide it by the total amount of points possible to that point, your calculation will be your percentage. All attempts will be made to keep your grades up to date on D2L.

#### **Help with course material:**

#### **Prof. G One-on-One Conferences!**

I am requesting that each student virtually meet with me every week. Because this course is asynchronous without virtual, real time course meetings, I am asking that each student touch-base with my on a weekly basis. The purpose of these conferences is to create a space where you can get one-on-one time to ask questions, receive feedback on your work, and clarify concepts from the course material.

#### **SURVIVING STATISTICS:**

Statistics is not a subject that is learned without practice *and* help. Do not be afraid to ask for help or come see me in my virtual office hours – you do not have to wait until our conference! **I am more than willing to go the extra mile, but only if you are, too.**

**The best rules to live by in this course are:**

- 1. Understand that you are going to work hard in this course and should expect to put in plenty of work time outside of the classroom.**
- 2. Do the work – it is worth it.**
- 3. Ask for help.**

**There is NO SUCH THING AS A STUPID QUESTION**

**Sociology 3630 – Statistical Analysis of Social Data**  
**Fall 2020: Tentative Weekly Themes and Reading Assignments<sup>1</sup>**

<b>Week of:</b>	<b>Unit</b>	<b>Theme</b>	<b>Reading Assignment</b> *D2L	<b>Lab Assignment</b>
Aug. 24 – Aug. 28	1	Introduction	*Best: (All)  *Keller: Ch. 1-3 (pp. 1-9) Ch. 4-5 (pp. 10-21)	1. SPSS Basics
Aug. 31 – Sept. 4	2	Basic Descriptive Statistics	*Keller: Ch. 7 (pp. 26-28)	2. Levels of Measurement and Frequency Distributions
Sept. 7 – Sept. 11	3	Measures of Central Tendency	*Keller: Ch.11-12 (pp. 40-51)	3. Levels of Measurement and Basic Descriptive Statistics
Sept. 14 – Sept. 18	4	Measures of Variability	*Keller: Ch.9-10 (pp. 32-39) Ch. 27 (pp. 98-101)	4. Frequency Distributions, Valid Percentages, and MCTs
Sept. 21 – Sept. 25				5. MCTs!
Sept. 28 – Oct. 2	5	The Normal Distribution	*Keller: Ch.27 (pp. 98-101)	6. The Mean and Standard Deviation
Oct. 5 – Oct. 9				7. Z-Scores and the Z-Distribution
Oct. 12 – Oct. 16	6	Samples and Sampling	*Keller: Ch.20 (pp. 79-81) Ch. 31 (pp. 110-111) Ch. 37 (pp. 124-125)  *Krejcie and Morgan (All)	8. Areas Under the Curve
Oct. 19 – Oct. 23				9. The Sampling Distribution
Oct. 26 – Oct. 30				10. Estimation Procedures
Nov. 2 – Nov. 6	7	Hypothesis Testing	*Keller: Ch.34 (pp. 118-119)	11. Confidence Intervals and Hypothesis Testing 1
Nov. 9 – Nov. 13				12. One and Two Sample Hypothesis Testing
Nov. 16 – Nov. 20	8	The ANOVA	*Keller: Ch.41A (pp. 140-141)	13. Independent Samples Hypothesis Testing
Nov. 23 – Nov. 27		<b>Thanksgiving Break</b>		
Nov. 30 – Dec. 4.	9	Chi-Square Tests	*Keller: Ch.33 (pp. 116-117)	14. ANOVA and the Chi-Square Statistic
Dec. 7 – Dec. 11	10	<b>Real World Research</b>		
Dec. 14 – Dec.18	Final	<b>Final Lab / Paper</b>		

<sup>1</sup> The most up-to-date calendar is maintained on D2L; all dates and readings are tentative and subject to change by the professor

## COURSE EXPECTATIONS

### Course Ground Rules:

Sociology is one of the few subjects that allows us to explore ourselves as part of something bigger, how something beyond our immediate lives impacts who we are, and how who we are impacts other individuals and groups. Sociology is dynamic and exciting. Social problems and issues—how we understand, interpret, and deal with them, are also dynamic and can cause serious, but important, debate. Therefore—**first and foremost**—every participant's views are valid and every voice **must** be respected.

Success in this class will be achieved through your own energy, engagement, inquisitiveness, and **ability to be open-minded**. An environment conducive to open dialogue is the goal. The classroom is a space for learning, not just from lecture but also from your fellow colleagues.

There are three ground-rules under which you and I will be approaching this course:

1. If you always agree with me, then there is only one of us doing the thinking – and that is dangerous!
2. You are expected to be active in creating your own knowledge.
3. RESPECT your peers, yourself, and respect the gravity of the subject matter.

### Engagement:

Class participation is class engagement. Engagement in this course is exercised through your continued and productive contribution: reading assignments are completed, assignments are finished and submitted on time, and mindfully participate in other activities. Engagement in the course is both critical to your personal success and the success of the group.

### Tokens:

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 assignment, you miss a one-on-one conference, or you forgot to log-on for a lab, use a token. You still have to complete the work, but if life happens, let me know ahead of the due date and turn in a token. That's it.

If life REALLY happens, the student code of conduct has assurances for you and the proper protocol to make sure you can complete the course:

*The professor will grant make-up privileges (when make-up is possible) to students for properly verified absences due to illness, emergency, participation in an official University activity, or participation in volunteer emergency work (110 ILCS 122/); and such absences will not militate against students in classes in which attendance is used directly in determining final grades. It is the student's responsibility to initiate plans for make-up work and to complete it promptly. If in the professor's judgment the duration or number of absences renders make-up unfeasible, the professor may contact the Vice President for Student Affairs and the Department Chairperson to determine an appropriate action.*

## General Communication and Conduct Policy - Netiquette Expectations

Eastern Illinois University (EIU) is committed to open, frank, and insightful dialogue in all of its courses. Diversity has many manifestations, including diversity of thought, opinion, and values. I encourage all learners to be respectful of that diversity and to refrain from inappropriate commentary. Should such inappropriate comments occur, I will intervene as I monitor the dialogue in the courses. I will request that inappropriate content be removed from the Course room and will recommend university disciplinary action. Learners as well as faculty should be guided by common sense and basic etiquette. The following are good guidelines to follow:

- Never post, transmit, promote, or distribute content that is known to be illegal.
- Never post harassing, threatening, or embarrassing comments. If you disagree with someone, respond to the subject, not the person. Conflicts of ideas are encouraged, while conflicts of feelings are discouraged.
- Never post content that is harmful, abusive; racially or culturally insensitive, or religiously offensive, vulgar; sexually explicit, or otherwise potentially ignorant.

In all my classes, I strive to provide a positive and productive learning environment for students. It is important that we all act in a respectful manner toward each other and do not disturb the class.

### Help with course material:

Office hours are provided for students to seek guidance with course content. Office hours are provided for the sole purpose of helping students and should be utilized as needed. I am more than willing to go the extra mile but only if you are, too.

I routinely check the course for postings and emails Monday – Friday between 8a and 12pm and occasionally on the weekend. I will respond within 24 hours unless your message is sent over the weekend, then allow up to 48 hours for a reply. *In the case of an emergency only, you can text me at 734-717-0901.*

### 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](#)

## **DISCLAIMER**

The course content and this syllabus are subject to change at any time to allow for a flexible and open learning environment.



## **IMPORTANT INFORMATION**

### 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 call 217-581-6583 to make an appointment.

### The Student Success Center:

Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center (<http://www.eiu.edu/~success>) 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.

### Booth Library:

Located in the center of campus, Booth Library is the best place to do research, find expert help, or study in a calm, distraction-free environment. In addition to the many print resources, Booth provides access to high quality e-books, journals and scholarship not freely available on the Web. Stop by the Reference Desk or go to <http://library.eiu.edu> to explore library resources. Get expert help with your research by contacting the Booth Library reference librarians. Visit, call 581-6072, or go to <http://booth.eiu.edu/ask> to connect with a librarian.

### 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 his or her 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.

### Academic Integrity:

**ALL STUDENTS ARE EXPECTED TO COMPLETE THEIR OWN INDEPENDENT WORK.** Students are expected to maintain principles of academic integrity and conduct as defined in EIU's Code of Conduct:

<http://www.eiu.edu/judicial/studentconductcode.php>

***Violations will be reported to the Office of Student Standards.*** These policies include cheating, fabrication, falsification and forgery, multiple submissions, plagiarism, complicity to such acts, computer misuse, and classroom disruptions. You are responsible for your work, the quality of your work, and the validity of your work. Any violation of academic integrity is serious and, if founded, could result in a failing grade on the assignment – and if serious enough – in the course.