# SOC 351 SOCIAL STATISTICS
## Fall 2023 | Section 1: Online

**Instructor**:     M. David Chunyu, Ph.D., Associate Professor of Sociology
**Lecture**:     Fr, 11:00AM – 12:50PM, on Zoom (Meeting ID 919 1944 1808; Passcode "Median$")
**Lab:**     Online and asynchronous
**My Office**:     Science Building (SCI) B335, Stevens Point Campus
**Office Hours:**     Tu Th, 10:00AM – 3:00PM
     or by appointment for meeting in my office/on Zoom
**E-mail**:     dchunyu@uwsp.edu *(please put "SOC 351" in the email subject line)*

## COURSE OVERVIEW

This course provides a general introduction to statistical techniques for analyzing social science data. Familiarity with statistics is important for the informed citizen because many social policy debates center on the use of statistical information. Statistics is also a necessary tool for those interested in social research, an increasingly important source of employment opportunities for social science majors.

Students will learn techniques for summarizing data, examining relationships among variables, generalizing from samples to populations, and testing statistical hypotheses.

Learning activities of this course will include lectures, video watching, practice and review exercises, lab activities, and homework assignments.

The laboratory portion of the course is designed to complement the lectures by letting students gain hands-on experience carrying out various kinds of statistical exercises. The main activities will be computer-intensive and will take place in a computer lab (virtual or physical). Students will learn how to use SPSS Statistics, a widely used statistical software for social scientists. We will mainly be using SPSS to analyze data from the General Social Survey (GSS). In addition, students are also expected to carry out certain lab activities that do not involve computers but are done by hands only.

This course (or PSYC 300) is required for Sociology and Social Work majors.

### Prerequisites

MATH 90 or equivalent; or instructor consent.

- ❖ Generally if you can add, subtract, multiply, and divide, and follow simple rules of

logical deduction, then you have the tools necessary to succeed in this course. ***However, it is imperative that you keep up with the progress of the course at all times!*** Due to the extremely technical and cumulative nature of this course, if you fall behind at any stage, it can be difficult to catch up. Therefore, regular class participation, meticulous notes, and timely completion of class and lab tasks and assignments are essential.

## COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:
1. Demonstrate appreciation for when, why, and how social statistics are used;
2. Articulate the basic concepts and methodological procedures of data analysis, as well as the logic underlying those procedures;
3. Process, analyze, and interpret data for the social sciences [e.g., the General Social Survey (GSS) data];
4. Use statistical software (e.g., SPSS) to conduct basic data analysis;
5. Apply critical thinking to engage in analysis of quantitative research methods and research findings;
6. Use and translate quantitative research evidence to inform and improve professional practice, policy, and service delivery;
7. Use professional practice to inform social science inquiry and research.

## Social Work Competency

For Social Work majors, all aspects of this course help them work toward the Council on Social Work Education (CSWE) competency of **"practice-informed research and research-informed practice"** for accredited social work programs:

➢ *Engage in practice-informed research and research-informed practice.*

Social workers understand quantitative and qualitative research methods and their respective roles in advancing a science of social work and in evaluating their practice. Social workers know the principles of logic, scientific inquiry, and culturally informed and ethical approaches to building knowledge. Social workers understand that evidence that informs practice derives from multi-disciplinary sources and multiple ways of knowing. They also understand the processes for translating research findings into effective practice.

## CLASS MATERIALS

### Textbook

The following book is required and has been ordered at the university bookstore (please visit https://uwsp.bncollege.com to get the text rental information):

Chava Frankfort-Nachmias, Anna Leon-Guerrero, and Georgiann Davis. 2020. *Social Statistics for a Diverse Society. 9th Edition.* SAGE Publications, Inc.

Students can also access the textbook supplements (just the supplements, not the textbook) at the student study website: https://edge.sagepub.com/frankfort9e/student-resources

### Additional Course Materials

Additional course materials (the instructor's lecture slides, videos, datasets and related documentation, review exercises, assignments, exams, website/platform links, etc.) will be made available in the online course management system Canvas canvas.uwsp.edu. You will use your UWSP account to login to the course on Canvas. If you have not activated your UWSP account, please visit the Manage Your Account page to do so.

### Course Technology Requirements

View this website to see minimum recommended computer and internet configurations for Canvas.

You will also need access to the following tools to participate in this course:
- webcam
- microphone
- a stable internet connection (don't rely on cellular)
- a calculator (see below for more information)
- the SPSS software (see below for more information)

Each student should get a calculator with the square and square-root functions. This can be either a conventional standalone calculator like a regular scientific calculator, or a calculator application/app on a computer/tablet/mobile device. A graphing calculator won't be necessary. The calculator will be used for class exercises, lab activities, homework assignments, and exams.

The SPSS software is accessible on all campus computers, so in order to use the software students can either go to a campus computer lab in person (see the main campus lab hours under the "Teaching and Learning

Resources" section) or use their home computers to get connected to the UWSP remote computer lab virtually at remotelab.uwsp.edu.

> ❖ ***Special note:*** In case students want to use the UWSP remote computer lab remotelab.uwsp.edu, they are recommended to use a PC (with a Windows operating system) rather than a Mac/iPad (with an Apple operating system), because there have been reports that Mac/iPad users tend to have difficulty getting access to the UWSP remote lab.

***Disclaimer:*** *It would be OK to use statistical software other than SPSS for course assignments, such as Excel, Stata, SAS, R, etc., but **instructions will only be provided in SPSS.** Therefore, if a student chooses to use non-SPSS software and data format for completing the required coursework, then **it will be students' own responsibility to figure out how to use the non-SPSS software and data format** in order to complete the pertinent course assignments.*

## COURSE STRUCTURE

This course will be delivered entirely online. Most of the coursework will be delivered through the online course management system Canvas canvas.uwsp.edu.

In addition, students are required to participate in weekly online class meetings on Zoom. We will use the same Zoom link throughout the semester for the weekly online class meetings: https://wisconsin-edu.zoom.us/j/91919441808?pwd=dzhRVzUzOGM0a3dRSWYrUUVzQUdkZz09 (alternatively, use Zoom Meeting ID 919 1944 1808 with the Passcode "Median$"). For instructions on how to install and use Zoom, go to https://www.uwsp.edu/infotech/Pages/Tutorials/Zoom/Zoom.aspx.

This course consists of 12 weeks' substantive learning, and each week's learning consists of the following tasks:

> ❶ *Asynchronous lecture*
> Students are expected to study the instructor's lecture slides and pre-recorded videos in Canvas as well as the pertinent textbook chapter in advance. **Students must have completed this task before Friday 11:00AM in order to be prepared for the Zoom class meeting.**

> ❷ *Asynchronous lab*
> Students should also study the pre-recorded lab video tutorials and demonstrations posted in Canvas and replicate those activities in either a UWSP physical computer lab or through the UWSP remote computer lab at remotelab.uwsp.edu. **Students must also have completed this task before Friday 11:00AM in order to be prepared for the Zoom class meeting.**

❸ *Synchronous Zoom class meeting*

On every Friday 11:00AM-12:15PM, the class will meet live on Zoom (Meeting ID: 91919441808 Passcode: Median$). During the Zoom class meeting, the instructor will mainly lead students to work on exercises and practice problem solving; the Zoom sessions will also be used for Q&A. However, students should be aware that the Zoom class meetings will **NOT** be used for the instructor's lecture or lab teaching. **Therefore, it is essential that students should have already completed the aforementioned task ❶ (asynchronous lecture) and task ❷ (asynchronous lab) in advance.**

**During the Zoom sessions, students are also required to keep their webcams on, show their faces, and demonstrate their full attention to the in-class activities** [also see "Grading" → "Online Class Participation (5 Points)"]. The Zoom class meetings will be recorded and shared with the class afterwards.

❹ *Homework assignment*

Each week students will receive a new homework assignment. The due date for the weekly assignments will always be Tuesday in the following week [see "Grading" → "Homework Assignments (35 Points)" for more information].

❺ *Three (3) exams for the whole semester*

In addition to the regular weekly learning tasks, there will be three (3) exams throughout the semester: two midterm exams and one final exam [see "Grading" → "Exams (60 Points)" for details].

## Additional Communication Expectations for Students

➢ Professional and respectful tone and civility are used in communicating with fellow learners and the instructor.
➢ Written communication, both formal and informal, uses Standard English rather than popular online abbreviations and regional colloquialisms.
➢ Spelling and grammar are correct.

## GRADING

A student's final course grade is based entirely on the "TOTAL POINTS" they have earned over the summer session. The "TOTAL POINTS" are simply the total crude points a student has accumulated from homework assignments, plus optional bonus points if applicable, and **summation** is the only

mathematical operation used for calculating a student's "TOTAL POINTS". Thus, no percentage, proportion, or division is used in the "TOTAL POINTS" calculation. (___Important note:___ *The "Total" % column or other automatically generated columns in the "Grades" area of Canvas will* <u>*NOT*</u> *be used, because they reflect some sort of percentage calculation, which is inconsistent with the grading system of this course. Also see the "Grading Scale" section below.*)

*A student's max TOTAL POINTS consist of the following:*

> ➢  *Homework Assignments*        **35 Points**
>
> ➢  *Exams*        **60 Points**
>> ❖  *1st exam*        *15 points*
>> ❖  *2n exam*        *15 points*
>> ❖  *Final exam*        *30 points*
>
> ➢  **Online Class Participation**        **5 Points**

*Max Total = 100 Points*

> ➢  **Homework Assignments (35 Points)**

There will be weekly homework assignments throughout the semester. Some of the assignment tasks are about manual calculations, while others involve using a computer and statistical software to analyze real-world datasets.

Again, in order to use the SPSS software students can either go to a campus computer lab in person (you may have to install SPSS on some of these lab computers yourself if the software program hasn't been installed there already, but that is fairly easy to do) or use their own computers to get connected to the UWSP remote computer lab virtually at remotelab.uwsp.edu; and in case students want to use the UWSP remote lab they are recommended to use a PC rather than a Mac/iPad. Students can refer to the instructor's video tutorial in Canvas → "09/05 – 09/10: Introduction to the Course" module → "Lab: Introduction" on how to get connected to the UWSP remote lab. Additional information on the UWSP remote lab is available at https://www.uwsp.edu/infotech/Pages/ComputerLabs/Remote-Lab.aspx

All the needed datasets and documentation are available in Canvas → "Data" module.

***All weekly assignments will be due on Tuesday of the following week.*** For example, the assignment for the first week (09/05 – 09/10: Introduction to the Course) will be due on Tuesday (09/12), the assignment for the second week (09/11 – 09/17: Organization of Information) will be due on Tuesday (09/19), so on and so forth. ***All assignments should be submitted to Canvas (see below).***

*Note*: For assignment submission to Canvas, students can either type up their work as text or write their work on paper by hand and then upload pictures of their hand-written work. In case students want to submit pictures, students must make sure their pictures are fully legible. Students are recommended to upload pictures as JPG/PNG/PDF/Word files; try to avoid HEIC photos or compressed/zip files please, because HEIC photos and compressed/zip files do not display in Canvas.

➢ *Exams (60 Points)*

There will be three (3) exams: two midterm exams and one final exam. All exams will be take-home exams and are to be submitted to Canvas. The exam questions will be based on lectures, reading, pre-recorded videos, review exercises, lab activities, and assignments.

The first two exams will be given in the middle of the semester and the exam arrangements will be announced in advance. These two midterm exams may include multiple-choice questions, test problems, and SPSS application problems. Each midterm exam is worth 15 points.

The third and final exam will be given during the final exam week, counting as 30 points. The final exam will ***NOT*** include SPSS application problems.

To help students prepare for the exams, the instructor will distribute review exercises for each unit. These review exercises are designed to help students digest and reinforce the class learning. Also importantly, these review exercises are very closely tied to the exams, so students are highly recommended to make good use of these review exercises when preparing for the exams.

Take careful note of the exam schedules, especially the date and time of the final exam, because the final exam schedule is usually not the same as the regular class meeting schedule. ***NEITHER EARLIER NOR MAKE-UP EXAMS WILL BE OFFERED EXCEPT IN DOCUMENTED CONFLICTS OR EMERGENCIES.***

➢ *Online Class Participation (5 Points)*

Your online class participation will be evaluated both quantitatively and qualitatively. As a member of an online class community, you are expected to come to each virtual class meeting, stay the entire online class session, and participate fully in each class period. At the end of the course, each student will receive a class participation score ranging from 0 to 5 points, based on the instructor's holistic evaluation of the student's class participation.

Online class attendance is mandatory. The instructor will check attendance periodically, by different means (e.g., calling students' names aloud, using Canvas attendance sheet, silent observation, etc.), and at various points in time (e.g., the beginning of an online class period, the middle, the end, etc.). As a result,

a student can be recorded as "absent" if they come in late and misses the instructor's attendance check at the beginning of an online class period; the consequence can be the same if a student leaves online class meeting early or exit the virtual classroom in the middle of a class period. ***Students' absences will only be excused if (1) the absences are due to documented reasons <u>and also</u> (2) students have communicated with the instructor about such absences in a timely manner. Having many unexcused absences will result in a low score for a student's class participation evaluation.***

The quality of a student's online class participation will also factor into their class participation evaluation. ***A student with repeated disruptive behavior/causing repeated distractions will receive a low score for their online class participation evaluation or will even receive no score at all*** (also see the "Online Classroom Etiquette" section below). In addition, students shall participate actively in the in-class exercises and activities. These in-class activities are designed to help you digest and reinforce the statistical skills taught in this course; at the same time, these in-class activities are also very closely tied to the homework assignments and exams, and so can be vital to your grade points. ***During the Zoom sessions, students are also required to keep their webcams on, show their faces, and demonstrate their full attention to the in-class activities; this is essential for building an online community and enhancing peer learning.*** Therefore, it will be in your best interest to attend every online class period and remain engaged during the virtual class meetings.

➢ ***Bonus Points (Optional)***
There might be opportunities for students to earn extra credits/bonus points.

**Grading Scale**

Again, a student's final course grade is based entirely on the "TOTAL POINTS" they have accumulated over the summer session. Thus, for calculating a student's "TOTAL POINTS", **<u>summation</u>** is the only mathematical operation used; that is, the instructor will simply add up all the points a student has earned from homework assignments, plus optional bonus points if applicable. No percentage, proportion, or division is used in the "TOTAL POINTS" calculation. (***<u>Important note:</u>*** *Again, the "Total" % column or other automatically generated columns in the "Grades" area of Canvas will <u>NOT</u> be used, because they reflect some sort of percentage calculation, which is inconsistent with the grading system of this course.*)

A student's "TOTAL POINTS" will then be converted into their final course grade according to the following scale:

A ...….…...93.00 – 100.00 points

A-….…..…90.00 – 92.99 points

B+….…..…87.00 – 89.99 points

B….….…...83.00 – 86.99 points

B-….……...80.00 – 82.99 points

C+….….…..77.00 – 79.99 points

C….….…....73.00 – 76.99 points

C-….….…...70.00 – 72.99 points

D+….….….67.00 – 69.99 points

D..….….…..60.00 – 66.99 points

F..….….……0.00 – 59.99 points

**Grade Posting**

Students' grade points from homework assignments, plus optional bonus points if applicable, will be posted in Canvas → "Grades" area as soon as they become available. A distinct grade item will also be created in Canvas → "Grades" area to show a student's "TOTAL POINTS" they have accumulated over the summer session. *(**Important note:** One last time, the "Total" % column or other automatically generated columns in the "Grades" area of Canvas will __NOT__ be used, because they reflect some sort of percentage calculation, which is inconsistent with the grading system of this course. Please also see the preceding "Grading Scale" section for explanation.)* It is a student's own responsibility to check Canvas regularly and to be kept informed of their own grade status.

## TECHNOLOGY AND LEARNING RESOURCES

**UWSP Quick Help Resources**

Quick links to resource information on Canvas, Zoom, Office 365 suite, accesSPoint, and UWSP library support: Quick Help Resources

**UWSP Technology Support**

- UWSP IT resources and services: Information Technology
- Seek help from the IT Service Desk (Formerly HELP Desk)
    - IT Service Desk Phone: 715-346-4357 (HELP)
    - IT Service Desk Email: itsvdesk@uwsp.edu

**Computer Lab Hours**

➢ (Stevens Point Campus) CCC 126
      Monday – Friday     6:00AM – 10:00PM
      Saturday – Sunday   7:00AM – 10:00PM

➢ (Stevens Point Campus) DUC 201
      Monday – Friday     7:30AM – 11:00PM
      Saturday – Sunday    Noon – 11:00PM

➢ Information on Marshfield campus, Wausau campus computer labs and additional computer labs on Stevens Point campus can be found here:

https://www3.uwsp.edu/infotech/Pages/ComputerLabs/default.aspx

**Canvas Support**
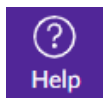
Click on the [Help] button in the global (left) navigation menu and note the options that appear:

| Support Options | Explanations |
|---|---|
| Ask Your Instructor a Question — Submit a question to your instructor | Use **Ask Your Instructor a Question** sparingly; technical questions are best reserved for Canvas personnel and help as detailed below. |
| Chat with Canvas Support (Student) — Live Chat with Canvas Support 24x7! | **Chat**ting **with Canvas Support (Student)** will initiate a *text chat* with Canvas support. Response can be qualified with severity level. |
| Contact Canvas Support via email — Canvas support will email a response | **Contact**ing **Canvas Support via email** will allow you to explain in detail or even upload a screenshot to show your particular difficulty. |
| Contact Canvas Support via phone — Find the phone number for your institution | Calling the Canvas number will let Canvas know that you're from UWSP; phone option is available 24/7. |
| Search the Canvas Guides — Find answers to common questions | **Search**ing the **Canvas guides** connects you to documents that are searchable by issue. You may also opt for **Canvas video guides.** |
| Submit a Feature Idea — Have an idea to improve Canvas? | If you have an idea for Canvas that might make instructions or navigation easier, feel free to offer your thoughts through this **Submit a Feature Idea** avenue. |

*All options are available 24/7; however, if you opt to email your instructor, he may not be available immediately.*

● Self-train on Canvas through the Self-enrolling/paced Canvas training course

**Protecting Your Data and Privacy**

UW-System approved tools meet security, privacy, and data protection standards. For a list of approved tools, visit this website. https://www.wisconsin.edu/dle/external-application-integration-requests

Tools not listed on the website linked above may not meet security, privacy, and data protection standards. If you have questions about tools, contact the UWSP IT Service Desk at 715-346-4357.

Here are steps you can take to protect your data and privacy.
- Use different usernames and passwords for each service you use
- Do not use your UWSP username and password for any other services
- Use secure versions of websites whenever possible (HTTPS instead of HTTP)
- Have updated antivirus software installed on your devices

## OTHER CLASS POLICIES AND EXPECTATIONS

### Expected Instructor Response Times

The instructor will attempt to respond to student emails within 24 hours. If you have not received a reply from me within 24 hours, please re-send your email.

> _Note_: If you have a general course question (not confidential or personal in nature), please post it to the Course Q & A Discussion Forum found on the course homepage. I will post answers to all general questions there so that all students can view them. Students are encouraged to answer each other's questions too.

The instructor will attempt to grade assignments within a week, however longer assignments may take me longer to read and assess.

### Online Classroom Etiquette

The online classroom is a learning environment and an academic community. All members of this community, students and instructor alike, have a special obligation to preserve an atmosphere conductive to the freedom to teach and to learn. What is essential to preserve such freedom is a culture of respect that honors the rights, safety, dignity, and worth of every individual. For that reason, all members of this community are expected to show courtesy, civility, and respect for one another.

Part of that obligation to maintain a positive learning environment is to ensure that the behaviors of any individual do not disrupt the process and flow of teaching and learning. Accordingly, students shall do their best to minimize distractions and disruptions that can interfere with their own learning and that of their peers.

*The instructor reserves the right to restrict a student's participation in online class activities if the student behaves in a way that interferes with the academic or administrative functions of the class.*

**Diversity and Inclusion**

UWSP supports an inclusive learning environment where diversity and individual differences are understood, respected, and appreciated. These differences include race/ethnicity, gender, class, political view, religion, color, national origin, sexual orientation, disability, age, marital or family status, as well as personality, learning styles, and life experiences. It is these very differences among us that enrich our learning environment and make us strong. We expect that students, faculty, administrators, and staff will respect differences and demonstrate diligence in understanding how other peoples' perspectives, behaviors, experiences, and worldviews may be different from their own.

**Disabilities/Special Needs**

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and/or special needs. If you have disabilities/special needs affecting your participation in the class and wish to have special accommodations, please contact the Disability Resource Center (DRC) as soon as possible. DRC will then coordinate with me in helping you receive the proper accommodations and auxiliary aids. DRC is located in room 108 in the Collins Classroom Center (CCC). DRC can also be reached at 715-346-3365 or [drc@uwsp.edu](mailto:drc@uwsp.edu). You can also find more information here: [http://www.uwsp.edu/drc](http://www.uwsp.edu/drc).

**Academic Support**

If a student finds it difficult to keep up with the class progress at any point during the semester, they are recommended to seek help from the instructor immediately. When a student comes to meet the instructor in person, the student should bring all the relevant lecture notes and handout materials either in hard copy or on electronic devices in order to facilitate the consultation process.

In addition, students may also use help from the Tutoring-Learning Center (TLC) and discuss their specific needs. TLC is currently located in the Collins Classroom Center (CCC) room 234. TLC can also be reached by phone (715) 346-3568 or email [tlctutor@uwsp.edu](mailto:tlctutor@uwsp.edu). The tutoring support is usually to be arranged directly between students and TLC staff and the instructor may assist with such arrangements when needed. Students can self-schedule an appointment with a TLC tutor through Navigate [https://uwsp.navigate.eab.com](https://uwsp.navigate.eab.com). More information on TLC can be found here: [http://www.uwsp.edu/tlc](http://www.uwsp.edu/tlc).

**Academic Integrity**

Academic integrity is central to the mission of this institution. Academic dishonesty in any form will not be tolerated and will receive disciplinary sanctions per the UWSP policies. The UWSP policies regarding student academic standards and disciplinary procedures can be found here: https://www.uwsp.edu/dos/Pages/Student-Conduct.aspx. If I observe academic misconduct, or if suspicions of academic dishonesty are reported to me, I will request that the identified parties to discuss the situation, and then the procedures set out in UWS/UWSP Chapter 14 will be followed.

**Emergency Preparedness**

It is important you familiarize yourself with the UWSP emergency plan and procedures prior to the occurrence of an emergency. Please go to www.uwsp.edu/emergency/Pages/emergency-procedures.aspx for details on all emergency responses at UWSP.

**Land Acknowledgement**

We recognize that the University of Wisconsin-Stevens Point occupies the lands of the Ho Chunk and Menomonee people. As a university community, it is important for us to acknowledge and honor this ancestral Ho Chunk and Menomonee land and the sacred lands of all indigenous peoples.

<u>COURSE OUTLINE</u>

| <u>Dates</u> | <u>Topics/Activities</u> | <u>Reading</u> |
|---|---|---|

**Univariate Analysis**

09/05 – 09/10      *Introduction to the Course*                                    Chapter 1.

<u>Key Topics:</u>

1. The Research Process and Variables
2. Independent and Dependent Variables
3. Levels of Measurement
4. Discrete and Continuous Variables
5. Descriptive and Inferential Statistics
6. SPSS and UWSP Remote Lab
7. GSS Dataset and Codebook

09/11 – 09/17      *Organization of Information*                                  Chapter 2.

<u>Key Topics:</u>

1. Frequency Distributions: Frequencies, Proportions, and Percentages
2. Construction of Frequency Distributions by Level of Measurement
3. Grouped Data/Distributions: Stated Limits, Real Limits, Midpoints of Class Intervals
4. Cumulative Distributions
5. Rates
6. Reading Statistical Tables
7. Graphic Presentation

*A Basic Math Review*                                          Appendix F.

<u>Key Topics:</u>

1. Inequality Notations
2. Square and Square Root
3. Order of Operations
4. Solving Linear Equations

09/18 – 09/24      *Measures of Central Tendency*                             Chapter 3.

<u>Key Topics:</u>

1. Mean, Mode, Median
2. Percentiles
3. The Shape of a Distribution
4. Choosing an Appropriate Measure of Central Tendency
5. Compute a (Numeric) Median for Grouped Data

09/25 – 10/01     *Measures of Variability/Dispersion*                                    Chapter 4.

Key Topics:

1. The Importance of Measuring Variability/Dispersion
2. IQV, Range, IQR
3. Variance and Standard Deviation
4. Choosing an Appropriate Measure of Variability/Dispersion

*10/04     *(Optional Zoom Meeting) Review of Assignments*

**10/06          *** 1st Midterm Exam *** (Take-Home and in Canvas)**

**Bivariate Analysis**

10/09 – 10/15     *Bivariate Tables/Cross-Tabulation for Categorical Variables*     Chapter 9.

Key Topics:

1. Constructing a Bivariate Table
2. Analyzing a Bivariate Table
3. Properties of a Bivariate Relationship

10/16 – 10/22     *Regression and Correlation for Interval-Ratio Variables*     Chapter 12.

Key Topics:

1. Linear Relationships
2. OLS Regression Line
3. Coefficient of Determination ($R^2$)
4. Pearson's Correlation Coefficient ($r$)

**Preparation for Inferential Statistics**

| | | |
|---|---|---|
| 10/23 – 10/29 | *The Normal Distribution* | Chapter 5. |

Key Topics:

1. Properties of the Normal Distribution
2. Areas under the Normal Curve
3. Standard ($Z$) Scores
4. The Standard Normal Table
5. Problem Solving

*11/01    *(Optional Zoom Meeting) Review of Assignments*

**11/03    *** 2nd Midterm Exam *** (Take-Home and in Canvas)**

**Inferential Statistics**

| | | |
|---|---|---|
| 11/06 – 11/12 | *Sampling and Sampling Distributions* | Chapter 6. |

Key Topics:

1. Population and Sample
2. Probability Sampling
3. The Sampling Distribution
4. The Sampling Distribution of the Mean
5. The Central Limit Theorem

| | | |
|---|---|---|
| 11/13 – 11/19 | *Estimation* | Chapter 7. |

Key Topics:

1. Estimation Defined
2. Confidence Level and Confidence Interval
3. Confidence Intervals for Population Means

4. Confidence Intervals for Population Proportions

11/20 – 12/03          *Testing Hypotheses*          Chapter 8.

Key Topics:

1. The Logic of Hypothesis Testing
2. The Five Steps in Hypothesis Testing
3. *t* Distribution and *t* Test

*11/23 – 11/26          NO CLASS! HAPPY THANKSGIVING!

12/04 – 12/10          *Analysis of Variance (ANOVA)*          Chapter 11.

Key Topics:

1. The Logic of ANOVA
2. The *F* Statistic
3. The Five Steps in ANOVA
4. Post Hoc Test

**Course Wrap-Up**

12/11 – 12/17          *The Chi-Square Test*          Chapter 10.

*Final Review*

**12/21 – 12/22          *** Final Exam *** (Take-Home and in Canvas. NO SPSS!)**

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*Unforeseen circumstances may necessitate changes in the course requirements and/or schedules.*
*Any changes will be announced in advance.*

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