

Cleveland State University
Levin School of Urban Affairs
Levin College of Public Affairs and Education
Instructor: Winifred Weizer
Office hours: (UR216) By appointment

Urban Data Analysis (UST 404 Section 501)
Fall Semester, 2023 Web class

Email: w.weizer@csuohio.edu
Phone: 216-523-7574

Course Description: Urban research decisions and procedures; procedures for obtaining empirical knowledge about urban issues and ways to extract the meaning of urban data.
Prerequisite(s): MTH 114 or MTH 116 or STA 145 or MTH/STA 147 or equivalents with grade C or better or instructor permission.

Course Objective: This course is a four-credit course designed to introduce the student to the basic principles, techniques and the logic of data analysis. It also will familiarize the student with statistical reasoning. This course focuses on core statistical concepts and techniques that are used in many fields. This course focuses on knowledge and skill development in the statistical area. The course is designed to meet the following learning objectives:

Knowledge

- Understand mathematical models, graphs, tables and schematics and how to interpret and draw inferences from them.
- Recognize and interpret mathematical information when presented symbolically, visually, numerically or verbally.
- Understand alternatives that can be used in mathematical or statistical analysis and how to achieve optimal results.
- Recognize the limits of mathematical and statistical models and be able to explain how those limits affect everyday decision making.
- Understand how mathematical and statistical information can assist in analysis, syntheses and evaluation of complex urban problems.

Skills

- Use arithmetic, algebraic, geometric, and statistical models to solve problems.
- Understand how to calculate formulae.
- Use technology to solve mathematical and statistical problems as well as to prepare graphs and charts.
- Develop the means used to estimate and check answers to mathematical problems.
- Represent mathematical information in a symbolic, visual, or verbal manner that has clarity of result.

General Education Statement: This course fulfills a Quantitative Literacy General Education requirement

Course Requirements: This class is done completely on the web. Students are expected to observe all due dates for assignments and tests. Since the student is working on their

own, they are expected to read the assigned chapters in the book. There are course materials that can be used to supplement the material as well. The student will also analyze a research article. Student success is enhanced by keeping up to date with required readings. **The book for this class is used with the course. Learning statistics without a book is difficult at best. WARNING – I FOLLOW THE BOOK AND THE CLASS VIDEOS, NOT WHAT YOU FIND ON THE WEB OR YOUTUBE! I GRADE BASED ON THE BOOK AND THE CLASS VIDEOS.**

Students are ***will be assigned Chapter videos to run each week. These are found under Panopto Videos.*** These will walk you through calculations of the formulae as well as giving you tips and tricks to survive the course. I will also post copies of the PowerPoints I use in a face to face class as well. These are accessible in .pdf format (3 up with lines for taking notes).

The Panopto videos focus on the material that you will encounter when taking the learning enhancers and the midterm and final. They walk you through how to do the calculations that you will be doing for the class. They are set up to be no longer than 5 to 15 minutes in length and allow the student to play them as many times as necessary.

I also have posted step by step videos on how to enter formula into Excel and use that for calculations as well!

Additional material will be posted under “Panopto videos”.

The most common problem that students have with Blackboard is the result of not allowing “pop-ups” from the Blackboard site. You will need to do this to view any of the documents on the site.

Course Method: This class is designed to provide the student with a number of ***tools that can be used for self-assessment as you work through the material.***

The ***chapter reading questions*** are designed to encourage students to read the chapters in their book. ***These questions should be asked to clarify the material that is in the book that is confusing or unclear. They are your questions that you would ask me in person if you did not understand something.*** These questions will be ***answered on the discussion boards for the chapters.*** If there is a concept that a significant number of the students are having difficulty with, I will tape a lecture around the question and then notify the class to access it in the Panopto Video section. ***These questions should be submitted to me by the date that they are due using the assignment link under Course Content.*** You are required to submit at least 2 questions for chapters 3, 4, 5, 7&8, and 11&12. I do encourage more questions if you have them but this is the minimum that I will require from each of you. If you fully and completely understand the material in the chapter, you need to send me that message so that you receive credit. (However, please be sure to do well on the material when presented to you on the learning enhancers or midterm or final.)

--The ***homework*** is a means to assist the student in determining what out of the lectures, readings and postings that they might not have understood, as well as to provide additional

practice in some of the calculations and interpretations. **These focus on the material presented in the book.** *You will submit your work through Blackboard.* I suggest that you scan your work. Please be sure that we can READ your scanned copy. Sometimes pencil calculations are very light on your paper and will not scan well. We need to be able to read the work that you have done. You also can take a picture of the answers with your phone and upload that for us. Due dates are noted in the syllabus.

--**The practice assignments** provide the student the means to work on solving questions that build on the homework and also **reflect what will appear on the learning enhancers, midterm and final.** These are practice for your tests. These are graded and count toward your final grade. Detailed answers will be posted for the student to check their work. **Due to this, late practice assignments cannot be accepted for grading once the answers post.** These should be submitted via the links in Blackboard.

--**The learning enhancers** allow the student to have a “**practice**” test before the material is covered on their midterm and final. Since they are each only worth 5% or 5 points towards your final grade, if you do not do well, they will not impact your final grade as heavily as the midterm and final. These also assist the instructor in determining what material might need to be reviewed to clarify areas of confusion before you take the midterm or final. These are timed. I will post a review sheet before the enhancer that will explain what the enhancer will cover as well as the amount of time that will be provided. I **strongly suggest** that you make up notes that cover the areas the enhancer will cover before taking it. Many times, students cannot complete the enhancers because they are attempting to look up how to do calculations while in the middle of the enhancer. Although you generally will only post your final answer for the questions, I will need to see your calculations when I grade your enhancer since partial credit is possible. Please scan and send them to me in course messages when you complete the enhancer. The enhancer will be available from Friday to Sunday to accommodate work schedules. **Caution**, once you begin the enhancer, you will have to complete all of your work within the time allotted.

--The **midterm and final** are **traditional tests** that should reflect what you have learned and corrected going through the self-assessment items. These also are timed. I will post review sheets before the tests are given. Once again, I **STRONGLY SUGGEST** that you make up notes before taking the tests. These will be accessible from Friday to Sunday of the weekend they are due and will require you to do the complete test within the time allotted. Once you start the test, you must finish it within the time allotted. As with the enhancers, I will need to see your calculations when I grade your test. Please scan and send them to me using *Course Messages* when you complete the test.

I strongly recommend for the learning enhancers and the midterm and the final, that you create at least 2 pages of notes with procedures to do the calculations. Attempting to find and understand the material in the book when taking a timed test generally does not leave you enough time to finish. **You probably noticed that I have repeated this 3 time** yes, *I do think it is important and can help you with the tests.*

The four learning enhancers and the midterm and final will be given as noted in the syllabus. Homework questions will be posted on Blackboard. Due dates for homework are as noted in the syllabus. Practice assignment dates are noted in the syllabus as well.

Due dates shown in the syllabus are the last possible date the assignment can be submitted. *I do give a slight grace period for homework but once the learning enhancer is given that covers the chapter, it will no longer be accepted.*

-- **The Article Review** is an assignment which assists you in applying material that you learn in the class to a research article that has been published in a peer reviewed journal. You will take a peer reviewed journal article and deconstruct it by answering a preset group of questions.

Grading Policy: Grades are based on the results of homework, learning enhancers, group assignments, project, midterm, final and class participation. The grade will consist of the following;

Reading questions	5%	5 points
Practice Assignments	10%	10 points
Homework	10%	10 points
Article review	10%	10 points
4 learning enhancer s	20% (5% each)	20 points
Midterm	20%	20 points
Final	25%	25 points

Makeup exams will be given only with prior approval of the instructor.

Grading scale: 94- 100 A 93-90 A- 89-87 B+ 86-83 B 82-80 B- 79-77 C+
76-70 C 60- 69 D

Note: *The instructor reserves the right to adjust and modify the syllabus as needed throughout the semester. Announcements are sent to your CSU email. You need to check this at least twice a week. Failure to check your CSU email is not an excuse for missed tests or not knowing what is due each week.*

The four learning enhancers and the midterm and final will be given as noted in the syllabus. Due dates for homework are as shown in the syllabus.

A special note on homework. You ignore homework at your peril. If you choose not to submit your homework, you will lose a total of 10 points off of your final grade. Students have found that the homework points can mean the difference between a passing grade in the class versus one that they prefer not to have. Homework due dates are as noted in the syllabus. ***I will accept late homework for a chapter up to the date of the learning enhancer that covers that chapter. (NO homework will be accepted after Learning Enhancer 4 is done! Absolutely, positively, don't even think about it!)*** Homework is graded. **PLEASE! Be neat. You will not receive credit for answers that we cannot read or that are ambiguous.**

Academic Dishonesty

"Cheating" means intentionally misrepresenting the source, nature, or other conditions of academic work to receive undeserved credit. Cleveland State University affirms that acts of cheating debase the academic degree awarded, have no place in the University, and are severe offenses to academic goals, objectives and the rights of fellow students. CSU does not tolerate any type of cheating and will take disciplinary action up to and including expulsion.

Sometimes with web classes, students think that the instructor will not notice if they are submitting someone else's work. However, time has taught me that is not necessarily the case. You are all adults. I expect you to do your work ethically and appropriately. If I discover any evidence that someone is cheating on tests etc, I will refer that to the appropriate university division to resolve. Please be aware I have found this previously and I do not like having to apply the sanction. It is better to just do your own work.

Life Happens

I know that life does happen when we least expect it to. In that case, I expect to hear from you when it occurs, not 3 to 4 weeks after the fact. In many cases, I will work with you to help you keep on track in the course. I cannot do this unless you contact me.

Text: Bowen, Chieh-Chen. *Straightforward Statistics*. (2016) Thousand Oaks, CA. SAGE

Class Schedule and Readings

August 28 to September 3: Course introduction (on Panopto Video REQUIRED VIEWING), Introduction to Statistics

Read Chapter 1

Run the Panopto course introduction and Chapter 1 videos

September 1: Last day to join a course waitlist or drop with a full refund

September 3: Last day to add (CampusNet Registration)

September 3: Chapter 1 homework is due

September 4 to September 10: Summarizing and Organizing Data, Practice

Assignment 1

Read: Chapter 2

Run: Chapter 2 Videos

September 4 – Labor Day, no classes on campus

September 8: Last day to drop – no notation on transcript

September 9 Course withdrawal period begins – 'W' grade assigned

September 10: Chapter 2 homework is due

September 10: Practice Assignment 1 is due. (Answers will open on Blackboard on September 12th.)

September 11 to September 17: Descriptive Statistics, Practice Assignment 2

Read: Chapter 3

Run: Chapter 3 videos

September 17: Chapter 3 READING questions are due

September 17: Chapter 3 homework is due

September 17: Practice Assignment 2 is due. (Answers will open on Blackboard on September 19th.)

September 18 to September 24: Finish Descriptive Statistics, Practice Assignment 3, Review sheet for Learning Enhancer 1 is posted– covers Chapter 1 through 3

Read: Chapter 4

Run: Chapter 4 videos

September 24: Chapter 4 READING questions are due

September 24: Practice Assignment 3 is due

September 25 to October 1: Standard Z scores, Learning Enhancer 1 – covers Chapter 1 through 3 (Last day for Homework for chapter 1 to 3)

September 29 to October 1: Learning Enhancer 1 is open due no later than the 1st

Read Chapter 5

Run: Chapter 5 videos

October 1: Chapter 4 homework is due

October 2 to October 8: Principles of Probability, Practice Assignment 4,

Read Chapter 5

October 8: Chapter 5 READING questions are due

October 8: Practice Assignment 4 is due

October 8: Chapter 5 homework is due

October 9 to October 15: Practice Assignment 5, (Review for Learning Enhancer 2 – covers Chapters 4 and 5), Central Limit Theorem, Begin Hypothesis Testing,

Read: Chapter 6 & 7

Run Videos for Chapters 6 and 7

October 10: Columbus Day – No class on campus

October 15: Practice Assignment 5 is due

October 15: Chapter 7 homework is due

October 16 to October 22: Learning Enhancer 2 – covers Chapters 4 and 5 (Last day for Homework for chapter 4 and 5), Sample t Test When population standard deviation is known, Midterm Review is posted

October 20 to 22: Learning Enhancer 2 is open, final due date is the 22nd

October 23 to October 29: Midterm (covers Chapters 1-5),

Read: Chapter 8

Run: Chapter 8 videos

October 29: Chapter 7 and 8 READING questions are due

October 27 – 29: Midterm is open, final due date is the 29th

October 30 to November 5: One Sample t Test When α is unknown (Both Hypothesis tests and Confidence intervals) Practice Assignment 6, Review for Learning Enhancer 3 (covers Chapters 6 to 8)

Read: Chapter 11

Run: Chapter 11 videos

November 3: Last day to withdraw from classes

November 5: Practice Assignment 6 is due

November 5: Chapter 8 homework is due

November 5: Article review paper is due

November 6 to November 12: Correlation, Learning Enhancer 3 (covers chapters 6 to 8), Last chance to turn in homework for chapters 7 and 8

Read Chapter 12

Run: Chapter 12 videos

November 10: Veteran's Day, no on campus class

November 12: Chapter 11 Homework is due

November 10-12: Learning Enhancer 3

November 13 to November 19: Regression, Practice Assignment 7

Read Chapter 14

Run: Chapter 14 videos

November 19: Practice Assignment 7 is due

November 19 Chapter 12 homework is due

November 19 Chapter 11 and 12 questions are due

November 20 to November 26: Chi Square Tests for Goodness of Fit and Independence, Practice Assignment 8, Review for Learning Enhancer 4 (Covers Chapters 11, 12, and 14)

November 23 to 24: Thanksgiving Recess,

November 26: Practice Assignment 8 is due

November 26: Chapter 14 homework is due

November 27 to December 3: Learning Enhancer #4 (Covers Chapter 11, 12 and 14)

December 1 to December 3: Learning Enhancer 4 is open, final due date is

December 3 (Last day to submit homework for Chapters 11, 12 and 14)

December 4 to December 8: Final Thoughts and questions, Final review sheet will post

Final for this class will open on December 8 and will remain open to take to Thursday December 14

Change in schedule/requirements: This syllabus is a *guide* to the semester schedule and its requirements. *The instructor reserves the right to change this syllabus and any of its contents at any time during the course by notifying students verbally, by written addendum or by announcements through Blackboard.*

Note: Students are strongly encouraged to email the Instructor with questions or problems they may be having. I am on campus most days of the week. I check my email on a daily basis even when I am not on campus. Many questions can be resolved if you email me. I am happy to respond.

Questions regarding the university calendar (holidays and finals week schedule) can be resolved by using the following link to the registrar's office.

<https://www.csuohio.edu/registrar/academic-calendar>

University Policies

Students should refer to the Undergraduate Bulletin for procedures regarding add/drop and withdrawals and any other policies that may apply.

Physically challenged/Special Needs

Students with Special Needs

Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at (216)687-2015. The Office is located in Rhodes West 210. Accommodations need to be requested in advance and will not be granted retroactively.

Students should notify the instructor as soon as possible if they have been granted an accommodation through the Office of Disability Services.

<https://www.csuohio.edu/disability/disability>

Academic Tutoring (TASC): Workshops on improving academic success are offered through the Tutoring Center as well as tutoring for some specific course content. (Unfortunately, the tutoring center does not provide tutoring for this class. That is why we provide a tutor that works with all of our 404 sections so you do have support.)

However, other tutoring services that are provided by TASC are dynamite! The success coaching has been used by other of my students to help them overcome challenges that they have had with great success. Masterkeys provides great on-line tutorials for Excel etc. Information on the other Tutoring Center programs can be found at

<https://www.csuohio.edu/tutoring/tutoring>

Make use of these services..... you pay for them with your tuition!

University Counseling Center: The mission of the CSU Counseling Center is to support and empower our diverse student community through the provision of psychological services. Our services are confidential and include individual, couples and group counseling, crisis intervention, consultation, psycho-education, and referrals. These services are designed to help students cultivate their strengths and overcome obstacles to obtain their personal, academic, and career goals More information can be found at:

<https://www.csuohio.edu/counselingcenter/mission-statement-5>

The continuing threat of COVID has created stressors that few of us may realize are there. The CSU Counseling Center has successfully assisted our students in navigating those challenges. It is confidential and you can find the help to get you through the challenges that you might be facing there.