UST 404 Urban Data Analysis
Fall 2017 – Syllabus
4 credit hours
Cleveland State University
Maxine Goodman Levin College of Urban Affairs
Department of Urban Studies

Classroom Location:
Tuesday 6:00PM – 9:50PM
Lakeland: U 130
Lorain: UC 324

Instructor Information:
Kenneth J Galla Jr, MPA
Email: k.galla@csuohio.edu
Office hours: (UR323A) By appointment
Phone: 216-523-7544
Course tutor: Tom Sacharski (t.sacharski@vikes.csuohio.edu)

Course Description:
This course is a four-credit course designed to introduce the student to the basic principles, techniques and 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.

Course Objectives:
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

Required Text:
Bowen, CC. (2016). *Straightforward Statistics*. Thousand Oaks, CA: Sage.

Course Method/Expectations:
This course consists of weekly reading, homework, and group work as well as a weekly lecture and discussion. The student is expected to complete all reading assignments prior to class, attend all class periods, submit group and homework assignments when due, complete all quizzes, the midterm and final. The student will also analyze a research article using concepts discussed in the course.

This course will require a significant time commitment outside of class on your part. Weekly class periods are a supplement to time outside of class spent on reading, homework, blackboard discussions, research article, exam prep, etc. Some concepts will require more time and effort to master than others.

Through Blackboard discussion boards, after each class period the student will identify what material was most clearly understood from the day's lecture and what material was least clearly understood. This information will be used to determine which topics need to be reinforced with additional class time and resources. These questions are due by midnight on Thursday following class and cannot be submitted late.

Class attendance is critical to student success. It is impossible to obtain credit for attendance and group projects if you are not present for the class. Attendance will be taken at varying times during each class period.

Supplemental information will be supplied through Blackboard. Copies of the PowerPoint used to facilitate the lecture will be made available after the class period.

This course is designed to provide the student with **tools that can be used for self-assessment.** The **homework** assists the student in determining what content from the lectures they might not have understood, as well as to provide additional practice in some of the calculations and interpretations. The **group assignments** provide the student the means to work in a group solving questions that build on the homework. They also reflect content that will appear on the quizzes, the midterm and final. **The quizzes** allow the student to determine if class notes are adequate to assist in solving the problems before taking the midterm and final. The quizzes cover a small amount of the material that will be

covered on the midterm or the final. Quizzes also assist the instructor in determining what material might need to be reviewed to clarify areas of confusion before the midterm or the final is taken. Each quiz only counts for 5% of your grade (5 points out of the 100). This means you can do poorly on the quiz and still succeed in the course. All students will take a **midterm and a final** for this course. These exams will cover the same material that was covered on the quizzes.

Students are permitted to prepare 2 pages of notes to use when taking quizzes, the midterm, and the final exam. Paper may not be larger than 8.5 x 11 (front and back counts as two sheets). Students also need a calculator. Your calculator should be able to perform basic mathematical operations, exponents, and square roots. You may not use your cell phone as a calculator during quizzes and tests. The instructor will not provide calculators.

Statistics may be intimidating. This course is designed to introduce you to topics that build on each other. Falling behind in readings or in coursework will impede your success. If you are absent, it is your responsibility to obtain notes from another classmate and arrange time with the course tutor to get caught up.

A special note on homework: Homework represents 10% of your total grade for this course. Successful completion of homework not only helps prepare the student for quizzes and exams, but points earned from homework completed on time can be the difference between a passing and failing grade for the course. Homework is due prior to the start of class on the due date provided in the syllabus. No credit will be given for late homework. Points will not be given for illegible or ambiguous answers on homework. Homework will be graded for accuracy, but feedback will not be provided. Answer sheets will be posted in Blackboard after the homework is due. It is the responsibility of the student to check answers compared to the posted answer sheet.

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

Attendance	10%
Discussion questions	5%
Group Assignments	10%
Homework	10%
Article review	10%
Quizzes	20% (5% each)
Midterm	15%
Final	20%

Exam attendance is required. Makeup exams will be given only with prior approval of the instructor.

Student Grading:
CSU uses the following letter grades with plusses and minuses. In the Levin College the letter grades follow this numeric scale:

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A   = 94-100%
A-  = 90-93
B+  = 87-89
B   = 83-86
B-  = 80-82
C+  = 77-79 (there is no C+ grade for graduate students; C = 70-79 for grad students)
C   = 70-76 for undergraduates, 70-79 for grad students
D   = 60-69 (there is no D for graduate students)
F   = 59 and below for undergraduates, 69 and below for graduate students
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Grades of "I" and "X"

- X – Effective Fall 2016, for undergraduate courses the grade of "X" can only be administratively assigned by the Office of the University Registrar to indicate a grade has not been assigned by an instructor. For undergraduate students who have stopped attending/participating without notification and have not completed all assignments for reasons that cannot be determined, instructors should assign the earned grade. Any grade of "X" will become a grade of "F" at 11:59 PM the day following the grading deadline.

  Instructors of graduate courses continue to have the ability to assign the grade of "X" when appropriate and graduate level "X" grades follow the Incomplete Deadline as stated in the Academic Calendar.

- I - Incomplete. The "I" grade is given when the work in a course has been generally passing, but when some specifically required task has not been completed through no fault of the student.

An "I" grade can be assigned by the instructor when all three of the following conditions are met:
1. Student is regularly attending/participating in the class and has the potential to pass the course;
2. Student has not completed all assignments and has stopped attending/participating for reasons deemed justified by the instructor; and
3. Student has notified the instructor prior to the end of the grading period.

Technology in the Classroom:
Cell phones are to be turned off or set to vibrate during the class session. Texting should be reserved for breaks or non-class times. If you have a need to speak with someone or to text them, please leave the classroom. Cell phones are not to be on your desk during class time.

Laptops are acceptable for note taking ONLY! Anyone using a laptop is asked to sit in the last row of the classroom. If you use a laptop for notes, you must send me a copy of your class notes after each class. Please email them to k.galla@csuohio.edu.

Lectures may not be recorded without the permission of the instructor.

Communication:
The preferred method of communication for this course is email. I do not keep regular office hours at CSU, and will respond to voicemails left at my office phone weekly. Emails will be responded to within 48 hours.

Communication coming from me will be done through Blackboard and your CSU email account. Your CSU email can be forwarded to another account through CSU Campusnet.

Class Cancellation:
Because this course is offered via distance learning through the University Partnership, closure of the campus at Cleveland State, LCCC, or Lakeland will cancel class for the day.

Class Schedule and Readings:
Week 1: August 29: Chapter 1 Introduction to Statistics, Chapter 2 Summarizing and Organizing Data
- Read Chapter 1 and 2
- Group Project 1 due before leaving class
- Submit Blackboard discussion questions by Thursday, 8/31
- Homework 1 and 2 due before class on 9/5
- Read Chapter 3 before class on 9/5

Week 2: September 5: Chapter 3 Descriptive Statistics
- Group Project 2 due before leaving class
- Submit Blackboard discussion questions by Thursday, 9/7
- Homework 3 due before class on 9/19
- Read Chapter 4 before class on 9/19
- Prepare for quiz on Chapters 1 and 2 on 9/19

Week 3: September 12: no class
- Continue research on article review assignment
- Prepare for quiz on Chapters 1-2

Week 4: September 19: Chapter 4 Standard Z Scores
- Quiz 1 (Ch 1-2)
- Submit Blackboard discussion questions by Thursday, 9/21
- Homework 4 due before class on 9/26
- Read Chapter 5 before class on 9/26

September 26: Chapter 5 Basic Principles of Probability
- Group Project 3 due before leaving class
- Submit Blackboard discussion questions by Thursday, 9/28
- Homework 5 due before class on 10/3
- Read Chapter 6 before class on 10/3

- Prepare for quiz on Chapters 3-5 on 10/3

October 3: Chapter 6 Central Limit Theorem
- Quiz 2 (Ch 3-5)
- Submit Blackboard discussion questions by Thursday, 10/5
- Prepare for Midterm (Chapters 1-5) on 10/17
- Homework 6 due before class on 10/24
- Read Chapter 7 before class on 10/24

October 10: Columbus Day, no class
- Prepare for Midterm (Chapters 1-5) on 10/17
- Homework 6 due before class on 10/24
- Read Chapter 7 before class on 10/24

October 17: Midterm, Ch 1-5
- Homework 6 due before class on 10/24
- Read Chapter 7 before class on 10/24

October 24: Chapter 7 Hypothesis Testing
- Group Project 4 due before leaving class
- Submit Blackboard discussion questions by Thursday, 10/26
- Homework 7 due before class on 10/31
- Read Chapter 8 before class on 10/31

October 31: Chapter 8 One-Sample t Test
- Group Project 5 due before leaving class
- Submit Blackboard discussion questions by Thursday, 11/2
- Homework 8 due before class on 11/7
- Read Chapter 11 before class on 11/7
- Prepare for quiz 3 (Ch 6-8) on 11/7

November 7: Chapter 11 Correlation
- Quiz 3 (Ch 6-8)
- Submit Blackboard discussion questions by Thursday, 11/9
- Homework 11 due before class on 11/14
- Read Chapter 12 before class on 11/14

November 14: Chapter 12 Simple Regression
- Group Project 6 due before leaving class
- Submit Blackboard discussion questions by Thursday, 11/16
- Homework 12 due before class on 11/21
- Read Chapter 13 before class on 11/21

November 21: Chapter 13 One-way Analysis of Variance
- Group Project 7 due before leaving class
- Submit Blackboard discussion questions by Wednesday, 11/22
- Homework 13 due before class on 11/28
- Read Chapter 14 before class on 11/28
- Prepare for quiz 4 (Ch 11-13) on 11/28

November 28: Chapter 14 Chi-square Test
- Quiz 4 (Ch 11-13)
- Submit Blackboard discussion questions by Thursday, 11/30
- Homework 14 due before class on 12/7

December 7: Review/Catch-up
- Prepare for Final Exam (Ch 6-8, 11-14)

Tuesday, December 12: Final Exam (Ch 6-8, 11-14)
- Final Exam (Ch 6-8, 11-14)

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. Attendance guarantees that the student will be apprised of all changes.*

University/College Policies
University Deadlines
- For the current semester, the deadline for dropping a course is **September 8, 2017.**
- The last day to withdraw from the course is November 3, 2017.
- The final examination week is December 11-16, 2017.

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 MC 147. 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.

Writing Assistance
Students with difficulty writing may contact the Writing Center located in Rhodes Tower 124 for assistance. Students should use the American Psychological Association (APA) format for citations and reference pages.

Workshops on improving academic success are also offered through the Tutoring Center as well as tutoring for some specific course content. Information on the Tutoring Center can be found at

http://www.csuohio.edu/academic/advising/tutoring/

Plagiarism
Plagiarism is stealing and/or using the ideas or writings of another in a paper or report and claiming them as one's own. This includes but is not limited to the use, by paraphrase or direct quotation, of the work of another person without full and clear acknowledgment. The penalties for plagiarism are found in full in the Student Handbook (Office of Student Life) under Academic Regulations (Policy on Academic Misconduct) at the following link: https://www.csuohio.edu/sites/default/files/StudentCodeOfConduct.pdf