Graduate Center, The City University of New York
Course Schedule, UED 721, Fall 2022, Th 4:15PM - 6:15PM
HYBRID synchronous/asynchronous online
Course webpage:
http://cwladis.com/ued721/ContentsIntro.php

Synchronous meetings, via Zoom (see course webpage for exact dates).

UED 721: Statistical Reasoning and Inference

Course Description: In a rational world, scientific research may be the most powerful political tool for influencing policy and accomplishing beneficial changes in society. The goal of this course is to begin to provide the statistical and analytical skills that will enable us to uncover, secure, analyze and report rigorous scientific evidence using data. We will begin to understand that valuable data are everywhere, that anything can be data, and that all data can be analyzed systematically. Our sources may be archival or new, quantitative, or qualitative, obvious, or not so obvious. We will depend on critical thinking at every level so that we succeed in making careful research decisions informed by our awareness of our own subjective biases and limitations, as well as by the subjectivity in the research of others. We will commit to quality. We will strive to abide by the highest ethical standards in the use of data and in the communication of our results, as we utilize these very powerful tools.

Instructor:
Professor Claire Wladis
Email: profwladis@gmail.com or cwladis@bmcc.cuny.edu
For office hours see course webpage.

Software:
- **Google drive** (docs, sheets) account
- **Adobe Reader** for PDF files.
- **Stata**. The GC is currently negotiating a license that students can use which will hopefully be available by the start of the term. If not, you can purchase a 6 month license relatively cheaply ($48): https://www.stata.com/order/new/edu/profplus/student-pricing/. The most basic software package is fine, unless you yourself plan to

Expected Learning Outcomes: At the end of the course, students in UED 721 will be able to
- Demonstrate an understanding of basic statistics, social research design, causality, and inference using samples.
- Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
- Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical/statistical problems.
- Represent quantitative problems expressed in natural language in a suitable statistical format.
- Effectively communicate quantitative analysis or solutions to applied mathematical and statistical problems in written or oral form for a variety of audiences.
- Evaluate solutions to problems for reasonableness using a variety of means, including estimation.
- Apply mathematical/statistical methods to problems in other fields of study.
- Commit to quality (even if it takes longer) and to the search for robust inferences.
- Commit to abide by the highest ethical standards in the use of data and communication of results.

Grading:
Grades in this course will be based on the assignments posted in your google docs folder (see website for instructions). This class is project-based, rather than test or homework based, as the aim is to prepare you to work as a professional researcher. As assignments from the modules are submitted, I will give feedback in google docs to give you the opportunity to revise and respond—I see this work as a collaborative effort, which is common in educational research. Grades for assignments for each module will be posted in Blackboard and will be averaged together at the end of the semester using a simple average (unless otherwise noted on the assignment). I may also post points for each part of a project in the comments included in the document as we work, as I will allow for many opportunities for continuous revision throughout the term.

Deadlines: Deadlines will be posted on the course webpage for each module, or for individual assignments. The deadlines are primarily for pacing the class, to ensure that each of you have time to get through all of the material for the term on time, and that I have time to grade it. However, if something occurs which makes it difficult to meet a deadline (illness, unanticipated family commitments, difficulty with a particular topic, etc.), please write me as soon as possible via email to work out an alternate plan. When necessary, some flexibility with deadlines is possible, but it is important that you work this out with me in advance if at all possible.

Class Schedule: The class schedule will be maintained on the course website. The first 3-4 weeks have been posted, but this will be adjusted and further topics will be added based on student interest and backgrounds as ascertained during the first few class meetings and first few weeks of asynchronous assignments.