Quantitative Methods JuanBattle.com/statistics Fall 2023

This course will instruct students in file management and many quantitative methods used for the analysis of survey data. Each student will undertake an individual project and will work on every aspect of the research endeavor from identifying a topic for investigation to writing and presenting a final project. Final papers are electronically due at 4:15pmET on Tuesday (12/5).

Late homework assignments (including the final paper) will NOT be accepted. All assignments must be submitted on time (4:15 on their due date) in their entirety. Failure to do so will result in a zero (0) for that assignment. Further, NO incompletes will be given in this course. Every student WILL get a grade at the end of the semester.

<u>Grading</u> – Grading will be a combination of in-class oral and written assignments (25%); homework assignments (45%); a final paper (20%); and class participation, assessment of which is the sole discretion of the professor (10%).

Required Text:

Healey, Joseph. 2015. Statistics: A tool for social research. <u>10th Edition</u>.

Suggested Resources: (1) online statistics textbook; (2) wikipedia.com; and/or (3) YouTube.com

Topics – A brief outline of topics to be discussed in this course:

GSS – General Social Survey

SPSS

File creation & merging

Factor analysis

Creating flags & weights Creating aggregate variables Creating composites/scales

- Reliability Analysis

T-Test ANOVA Chi-Square

Pearson's Correlation

Missing Data

Survey Research Techniques

Regression

- Multiple regression (OLS)
- Logistic regression
- Stepwise regression

Creating dummy variables Complex Interaction Effects

Nonlinear Estimations

Longitudinal Analysis

(Age, Period, Cohort Effects)

Path Analysis

Structural Equation Modeling (SEM) Hierarchical Linear Modeling (HLM)

Event History Analysis & Survival Analysis

Policy Analysis