

ED 795 - WORKFLOW OF DATA ANALYSIS IN EDUCATION

Spring 2020

Instructor: Steve Porter	Time: Th 16:30 – 19:15
Email: srporter@ncsu.edu	Place: 224 Poe Hall

Meeting dates: This course meets in person every other week, see Moodle for the dates.

Office Hours: By appointment.

Textbooks:

- J. Scott Long, *The Workflow of Data Analysis Using Stata*, Stata Press, 2009.
- Michael N. Mitchell, *Data Management Using Stata: A Practical Handbook*, Stata Press, 2010.

Software: We will be using Stata version 15 or 16 for this course. Please let me know if you have an earlier version of Stata. Stata may be available for the semester for doctoral students in the College of Education, please contact me if interested. Stata is available for purchase at a discounted rate for graduate students (<https://www.stata.com/order/new/edu/gradplans/student-pricing/>).

I recommend purchasing either IC or SE. SE allows the use of larger datasets, where “large” is defined by the number of variables, not observations. If you think you might end up using a national dataset, go with SE.

Objectives: The typical quantitative methods course in the College of education focuses on the theory and application of a particular approach, such as multiple regression. For a given project, much has to happen before you are ready to run a statistical model. The purpose of this course is to provide you with the set of practical skills that you need to successfully design and complete a quantitative research project in education.

Prerequisites: ED 710 or the equivalent. Given the nature of this course, you should have some experience with Stata. Please contact me as soon as possible if you have never used Stata.

Tentative Course Outline: I have tried to group topics around two-week intervals. After the first class, there will be an off week and an in-class week. You will have do files and reading assignments for the off week, and then we will meet to discuss in class and work on do files in the following week.

Workflow and do files	Week 1
Creating Stata datasets and merging	Week 3
Cleaning and labeling datasets	Week 5
Dealing with variables: loops, recodes, strings, dates & times	Week 7
Subgroups, reshaping, and collapsing	Week 9
Missing data and multiple imputation	Week 11
Automating Stata output and creating graphics.....	Week 13
TBD	Week 15

Assessments: All assessments are open-book and open-note, but must be completed without outside assistance.

- Take-home exams (100%). You will have several short assignments during the semester that cover various topics in the course; these will be due by the following class meeting. These assignments will generally involve working with datasets and reporting results from your do files. You may use your notes, class do files and assigned readings to do the assignments, but you may not consult with any other people.

Late assignments will not be accepted, so please plan accordingly.

Final grades will be assigned using this scale:

$97 \leq A+ \leq 100$	$73 \leq C < 77$
$93 \leq A < 97$	$70 \leq C- < 73$
$90 \leq A- < 93$	$67 \leq D+ < 70$
$87 \leq B+ < 90$	$63 \leq D < 67$
$83 \leq B < 87$	$60 \leq D- < 63$
$80 \leq B- < 83$	$0 \leq F < 60$
$77 \leq C+ < 80$	

Important Dates:

Last class	April 16th
Last take-home exam due	April 30th (by 5:00 PM)

Disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Resource Office at Holmes Hall, Suite 304, Campus Box 7509, 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.01) (<https://policies.ncsu.edu/regulation/reg-02-20-01/>).

Academic Integrity: Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at <http://policies.ncsu.edu/policy/pol-11-35-01>. Your submission of any test or assignment indicates "I have neither given nor received unauthorized aid on this test or assignment."

Please note this syllabus is subject to change; any changes will be discussed in class.