

ECO 643-01/705-01 Econometric Methods

Fall 2021

4 credit hours

ECO 643: online asynchronous

ECO 705: TR 2-3:15pm, MHRA 2211

Instructor Information

Name: Prof. Marie Hull (she/her/hers)

Office location: Bryan 445

Email: mchull2@uncg.edu

Office hours: By appointment

Communication Response

I aim to respond to emails within one business day. In other words, I respond to emails within 24 hours, but emails received on the weekend may not receive a response until the following Monday. For questions about the course content, I encourage you to post in the discussion board since your peers may respond faster than me.

Course Description

This course, oriented towards applied practitioners, provides an introduction to many of the tools commonly used in econometric analysis. The focus is on research design, implementation, and microeconomic applications, rather than theoretical proofs. The goal of the course is for students to become familiar with a set of useful statistical techniques and learn how to use them to identify correlations and causal relationships using the SAS software system.

Prerequisites

ECO 625 and ECO 631, or permission of the Director of Graduate Studies.

Student Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Estimate and interpret simple and multiple linear regression models, as well as their nonlinear extensions.
2. Incorporate qualitative information into regression models through dummy variables.
3. Conduct statistical inference on regression model parameters, including inference that is robust to heteroskedasticity.
4. Detect and resolve common issues in econometric analysis, such as omitted variables and choice of specification.

Teaching Methods

The course is organized into eight modules. To facilitate your learning, each module contains a combination of assigned readings, videos, quizzes, discussion boards, and written homework. For readings from the textbook, I have provided a reading guide to help you read actively and check your understanding. I have also created additional text and videos to emphasize key concepts and further your understanding. Each module contains a discussion board where you may post questions to be answered by other students or the instructor. Quizzes are designed to give you initial feedback on your grasp of material. You have multiple opportunities to take each quiz since I expect you to still be learning at that stage. Supplementary readings and the associated discussion board assignments help you connect the material to the world beyond the course. At the end of each module, you will be assigned homework that includes written exercises and computer exercises. The homework will give you practice solving problems and will challenge you to think about concepts more deeply. I provide written feedback on homework, and homework solutions will be posted for you to go over.

Evaluation and Grading

Course activities will be given the following weights when calculating final grades:

- Math and statistics review module 10%
- Quizzes and discussion boards 10%
- Written homework 20%
- Midterm 1 (October 3–5) 15%
- Midterm 2 (November 21–23) 15%
- Final exam (December 5–7) 30%

Final course letter grades will be assigned based on the following scale:

- A 94% and above
- A- 90% to <94%
- B+ 87% to <90%
- B 84% to <87%
- B- 80% to <84%
- C+ 77% to <80%
- C 74% to <77%
- F less than 74%

Grades may be curved at the instructor's discretion to better align the distribution of student scores with the information carried by letter grades.

Math and statistics review module: In this module, students will review math and statistics topics at their own pace. You will receive full credit for this module once you pass a series of tests covering different topic areas.

Quizzes: Each module contains one to three quizzes designed to assess your understanding of material that was just introduced. You have three opportunities to take each quiz, and I keep your best score.

Discussion board posts: After supplementary readings, students are required to post in the discussion board and respond to two peers' posts. A grading guide is provided on Canvas.

Written homework: Homework assignments contain written exercises and computer exercises. Points are awarded based on completion and accuracy. Written homework should be organized and problems should be clearly labeled. You may work on the homework with other students, but you must write up your solutions in your own words. Any work that is a verbatim copy or a close copy of another student's writing (or the solutions manual, if you have somehow obtained it) will receive a zero.

Computer exercises should be completed in SAS. Turn in a copy of your program (i.e., your SAS code) and a copy of your SAS output. You must still integrate the output into your write-up.

Exams: There will be three exams: two midterms and a final exam, all taken online in Canvas. The first midterm covers Modules 1, 3, and 4, and can be taken in the October 3–5 window. The second midterm covers Modules 5–7 and can be taken in the November 21–23 window. The final exam is cumulative and can be taken in the December 5–7 window. (Module 2 is a standalone module containing the math and statistics review.) More information about the format of the exams and how to prepare will be provided as the exam date gets closer.

Late Work Policy

It is the student's responsibility to complete and upload homework to Canvas before the posted due date and time. Late homework will only be accepted under extreme circumstances. If you encounter a technical issue and are emailing homework, you must also include a screenshot of the error message in Canvas. I recommend that you plan to complete written homework well in advance of the due date and that you back up all files.

Make-up exams will only be offered under extreme circumstances. The student must provide documentation (e.g., a doctor's note) and give advance notice if possible.

Required Text and Software

Introductory Econometrics: A Modern Approach (7th ed.) by Jeffrey Wooldridge. ISBN 978-1337558860. [Note: An older edition will mostly suffice, but it is your responsibility to reconcile any differences between editions.]

SAS Studio, accessed by registering for SAS's OnDemand for Academics platform.

e-Portfolio

Students enrolled in the Master of Arts in Applied Economics degree program, the Certificate in the Economics of Health Analytics, and the Certificate in Quantitative Business Economics must successfully complete an e-Portfolio of significant assignments and final projects. As a requirement for graduation, students of these programs must receive approval of their e-Portfolio from the Director of Graduate Studies. The e-Portfolio demonstrates a student's cumulative knowledge of the program and fulfills the program's capstone requirement. This body of work can also be shared with prospective employers to help students distinguish themselves in the job market.

It is an expectation of this class that MA and economics graduate certificate students contribute to their e-Portfolio. Portfolio instructions may be found in the [Econ Grad Students](#) Canvas group. Links to the portfolio should be shared to economics@uncg.edu.

Academic Integrity Policy

By submitting an assignment, each student is acknowledging their understanding and commitment to the [Academic Integrity Policy](#) on all major work for the course.

Accommodations

UNCG seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Office of Accessibility Resources and Services (OARS) in 215 Elliott University Center, 336-334-5440, ods.uncg.edu.

COVID-19 Statement

As we return for fall 2021, the campus community must recognize and address continuing concerns about physical and emotional safety, especially as we will have many more students, faculty, and staff on campus than in the last academic year. As such, all students, faculty, and staff are required to uphold UNCG's culture of care by actively engaging in behaviors that limit the spread of COVID-19. Such actions include, but are not limited to, the following:

- [Following face-covering guidelines](#)
- Engaging in proper hand-washing hygiene when possible

- Self-monitoring for symptoms of COVID-19
- Staying home if you are ill
- Complying with directions from health care providers or public health officials to quarantine or isolate if ill or exposed to someone who is ill.

Instructors will have seating charts for their classes. These are important for facilitating contact tracing should there be a confirmed case of COVID-19. Students must sit in their assigned seats at every class meeting and must not move furniture. Students should not eat or drink during class time.

To make it easier for students to hear their instructor and/or read lips and if conditions permit, instructors who are fully vaccinated and who can maintain at least six feet of distance from students may remove their masks while actively teaching if they choose, but will wear a mask at all other times while in the classroom, including during the periods before and after class.

A limited number of disposable masks will be available in classrooms for students who have forgotten theirs. Face coverings will also be available for purchase in the UNCG Campus Bookstore. Students who do not follow masking requirements will be asked to put on a face covering or leave the classroom to retrieve one and only return when they follow the basic requirements to uphold standards of safety and care for the UNCG community. Once students have a face covering, they are permitted to re-enter a class already in progress. Repeated issues may result in conduct action. The course policies regarding attendance and academics remain in effect for partial or full absence from class due to lack of adherence with face covering and other requirements.

For instances where the Office of Accessibility Resources and Services (OARS) has granted accommodations regarding wearing face coverings, students should contact their instructors to develop appropriate alternatives to class participation and/or activities as needed. Instructors or the student may also contact OARS (336.334.5440) who, in consultation with Student Health Services, will review requests for accommodations.