

Economics 670: Econometrics  
Department of Economics, Finance and Legal Studies  
University of Alabama  
Fall, 2020

Professor: Daniel J. Henderson  
Lecture (001): TR 12:30 – 1:45, Bidgood 365  
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**Course Description:**

Introduction to methods of analyzing economic data. Topics include least squares, maximum likelihood estimation, statistical inference, and methods for handling data problems. We will cover both asymptotic theory and finite sample properties.

**Textbook:**

Econometrics (<https://www.ssc.wisc.edu/~bhansen/econometrics/>)  
Hansen, July, 2020

**Prerequisites:**

Ph.D. student in economics or a related field

**Grading Policy:**

The course will consist of several homework assignments, two in-semester examinations, and one comprehensive final examination. The course grade will be determined according to the following formula:

Homework	15%
Midterm I	25%
Midterm II	25%
Final Exam	35%

Note that homework assignments will require the student to use a statistical software package and to turn in output from that package. Further note that no late assignments will be accepted.

Note that no make-up exams will be given. If a student misses an in-semester examination for any reason, the weight of that examination will be added to that of the final examination (e.g., missing Midterm I would make the final worth 65% of the course grade).

#### Course Outline:

Conditional Expectation and Projection

Algebra of Least Squares

Least Squares Regression

Normal Regression and Maximum Likelihood

Introduction to Large Sample Asymptotics

Asymptotic Theory for Least Squares

Hypothesis Testing

Instrumental Variables

Generalized Method of Moments

Note that the schedule is subject to change depending on the pace of the course.

#### Academic Honor Code

All students in attendance at The University of Alabama are expected to be honorable and observe standards of conduct appropriate to a community of scholars. The University of Alabama expects from its students a higher standard of conduct than the minimum required to avoid discipline. At the beginning of each semester and on tests and projects, at the discretion of the course instructor, each student will be expected to sign an Honor Pledge.

The Academic Honor Pledge reads as follows: I promise or affirm that I will not at any time be involved with cheating, plagiarism, fabrication, or misrepresentation while enrolled as a student at The University of Alabama. I have read the Academic Honor Code, which explains disciplinary procedures that will result from the aforementioned. I understand that violation of this code will result in penalties as severe as indefinite suspension from the University.

## Disability Statement

If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary. If you have a disability, but have not contacted the Office of Disability Services, please call (205) 348-4285 or visit 133-B Martha Parham Hall East to register for services. Students who may need course adaptations because of a disability are welcome to make an appointment to see me during office hours. Students with disabilities must be registered with the Office of Disability Services, 133-B Martha Parham Hall East, before receiving academic adjustments.

## Severe Weather Protocol

In the case of a tornado warning (tornado has been sighted or detected by radar, sirens activated), all university activities are automatically suspended, including all classes and laboratories. If you are in a building, please move immediately to the lowest level and toward the center of the building away from windows (interior classrooms, offices, or corridors) and remain there until the tornado warning has expired. Classes in session when the tornado warning is issued can resume immediately after the warning has expired at the discretion of the instructor. Classes that have not yet begun will resume 30 minutes after the tornado warning has expired provided at least half of the class period remains.

UA is a residential campus with many students living on or near campus. In general classes will remain in session until the National Weather Service issues safety warnings for the city of Tuscaloosa. Clearly, some students and faculty commute from adjacent counties. These counties may experience weather related problems not encountered in Tuscaloosa. Individuals should follow the advice of the National Weather Service for that area taking the necessary precautions to ensure personal safety. Whenever the National Weather Service and the Emergency Management Agency issue a warning, people in the path of the storm (tornado or severe thunderstorm) should take immediate life saving actions.

When West Alabama is under a severe weather advisory, conditions can change rapidly. It is imperative to get to where you can receive information from the **National Weather Service** and to follow the instructions provided. Personal safety should dictate the actions that faculty, staff and students take. The Office of Public Relations will disseminate the latest information regarding conditions on campus in the following ways:

- Weather advisory posted on the UA homepage
- Weather advisory sent out through Connect-ED--faculty, staff and students (sign up at myBama)
- Weather advisory broadcast over WVUA at 90.7 FM
- Weather advisory broadcast over Alabama Public Radio (WUAL) at 91.5 FM
- Weather advisories are broadcast via WUOA/WVUA-TV, which can be viewed across Central Alabama. Also, visit wvuatv.com for up-to-the-minute weather information. A mobile Web site is also available for your convenience.

## Make-up final exams

If a legitimate conflict exists you may request a make-up exam from the instructor. If you choose to request a make-up exam for this course, you must do so (in writing) before the drop deadline. It is **the student's responsibility** to learn from the instructor if the request has been approved. Only students who are approved may take a make-up final exam. Students who have not requested a make-up exam in this course by the drop deadline will be required to resolve conflicting exams with the instructor in one of their other courses.

## UAct:

The University of Alabama is committed to an ethical, inclusive community defined by respect and civility. The UAct website ([www.ua.edu/uact](http://www.ua.edu/uact)) provides extensive information on how to report or obtain assistance with a variety of issues, including issues related to dating violence, domestic violence, stalking, sexual assault, sexual violence or other Title IX violations, illegal discrimination, harassment, child abuse or neglect, hazing, threat assessment, retaliation, and ethical violations or fraud.

## Covid Statement:

All University faculty, staff, and students are expected to maintain a commitment to the health and safety of our campus community. Due to the current COVID-19 pandemic, specific health and safety standards are in place to minimize exposure and community spread on campus. In the interest of your health and safety and that of all UA students, faculty and staff, the University reserves the right to change the mode of instruction or schedule of instruction at any time, based upon prevailing public health and other guidance. While the method of delivery may change, educational instruction and opportunities will continue. As such, the University will not provide a refund of tuition, in whole or in-part, based on any such changes. Detailed information on changes in format or schedule can be found at <https://studentaccounts.ua.edu/> and <https://financialaid.ua.edu/>.

All students must be familiar with and abide by the requirements outlined in the UA Return Plan | UA System Comprehensive Health and Safety Plan. Students must (1) wear a mask or face covering at all times while participating in face-to-face class; (2) adhere to social distancing standards; and (3) comply with all other health and safety restrictions. If a student refuses to comply with the requirements, the student will be asked to leave the class and reported for a conduct violation. Unless a student has an exemption from the requirement to wear a face covering, (more information can be found at <http://ods.ua.edu/covid-19-disability/>), the student will be reported to Student Life for further disciplinary action. More information on these requirements and UA Healthcheck system and screening can be found at [healthinfo.ua.edu/returnplan](http://healthinfo.ua.edu/returnplan). You are expected to visit the site and comply with all noted requirements related to in-person class attendance.