

AGEC 740: Advanced Econometric Applications in Agribusiness

Fall 2023 Course Syllabus

Course Description:

The advanced study of agribusiness research methodology using econometric tools to solve agribusiness problems. Advanced statistical methods, including multiple regression analysis, binary-choice models and other estimation techniques for agribusiness analysis will be presented; estimation issues such as multicollinearity, autocorrelation, heteroskedasticity, and related problems will also be addressed.

Course Objectives and Learning Outcomes:

The primary objective of this course is to familiarize students with some of the econometric tools available to conduct empirical agribusiness research as well as the issues that can arise in this analysis. Upon successful completion of this course, students will:

- have a solid working knowledge of regression analysis, its strengths and shortcomings, and how to identify and resolve basic issues;
- have the ability to interpret results and critically evaluate outcomes;
- understand which econometrics models are best used, given the types of problems they hope to solve and the data that are available;
- have developed some basic tools and coding capabilities with one or more statistical packages; and
- be able to make use of econometric models in the context of answering specific research questions.



Instructor: Anthony R. Delmond, PhD
Office: 143 Brehm Hall
Phone: (731) 881-1098
Email: adelmond@utm.edu
Office Hours: MW, 9:00-11:00 a.m. or by appointment
Credit Hours: 3.0
Prerequisites: *some statistical/econometric background preferred*

Course Resources:

This course will require students to have access to a computer as well as access to high-speed internet. Students will need speakers for lectures, word-processing and statistical software, and any other materials traditionally required for an online course.

Course Design:

This course will be taught online. New material will be assigned most weeks with occasional problem sets covering multiple sections. Exam weeks will be free of new content, but there may be deadlines for problem sets and research benchmarks that fall within those weeks. Plan ahead. The instructor will be out of the country from September 12 to October 18. This should not affect online courses, but it is worth noting if responses lag slightly due to time zone differences.

Recommended Materials:

Software:

In the past, the instructor has required students to use Stata for assignments and research. This semester, the statistical package students choose is an entirely independent decision (*note that Excel does **not** have sufficient tools to be used in this class*). The instructor can provide substantial support in Stata and R, as well as some support in Python and SAS. Students must provide the name of the software package and the necessary code for any problem sets, etc., so that the instructor can replicate students' work. *The professor will not guarantee partial credit on assignments utilizing a statistical package with which he is unfamiliar or to which he does not have access.*

Recommended Texts:

Any of these may be useful to students as the course will draw significantly from these (among other) resources.

- [Introduction to Econometrics, 4th Edition](#). James H. Stock and Mark W. Watson. Pearson, 2019. (or the [3rd Edition](#))
- [Mostly Harmless Econometrics: An Empiricist's Companion](#). Joshua D. Angrist and Jörn-Steffen Pischke. Princeton University Press, 2008.
- [Guide to Econometrics, 6th Edition](#). Peter Kennedy. Wiley-Blackwell, 2008.
- [Introduction to Modern Econometrics Using Stata, An](#). Christopher F. Baum. Stata Press, 2006.
- [Using Econometrics: A Practical Guide, 7th Edition](#). A.H. Studenmund. Pearson, 2017. (or the [6th Edition](#))**
 - In the past, the Studenmund book was listed as a required text for this class. Many students have found it very useful and older editions should be available for purchase at a much lower price.

Additional Readings:

Any other literature distributed throughout the semester is considered required unless otherwise stated by the instructor.

Assessments:

Participation: Participation points will be available in two ways. The video lectures will have internal quizzes that will be included as participation points. You will have as many attempts as you like on these, so this is a very simple way to boost your participation score. There will also be discussions in this course. Regarding group discussions, everyone is required to participate, and grades will be based on the quality and thoughtfulness of your engagement.

Assignments: There may be problem sets in this course as well as article reviews. Problem sets will require students to use statistical software to provide the answers to specific questions, and students will be required to turn in both written answers (with explanations) and their code and data. In other words, the instructor needs to be able to replicate the students' work and evaluate the process and explanation to help students learn and to assign grades. Requirements will be outlined in more detail in the individual problem sets. In addition to technical skills, interpretation is key to econometrics (that's one of the features that distinguishes it from statistics!). Article reviews will be assigned occasionally to correspond with certain topics. Students may be required to find papers using certain methods and/or explain why certain methods have been used in practice. These may be used in conjunction with discussions, but the individual work will be included in the Assignments section for grading purposes.

Exams: There will be three *noncumulative* exams. The nature of the material covered in this course, however, is such that concepts build upon each other and material often is repeated throughout the term. To ensure student success in this course, it is essential that students keep up with the material. For example, students should expect that the third exam will include necessary content from the early sections of the course, but the questions will be tailored largely to the content in the third section of the course.

Research Project: This course will require students to conduct some independent econometric analysis and to write up preliminary results. This is not meant to be a finalized paper (though it may be), but the tools of the class should be utilized in an attempt to answer some formal question relating to food or agriculture that can be tested empirically. There will be multiple benchmarks throughout the semester to keep students on track to meet the final deadline. An empirical paper (or a draft) should roughly follow the outline provided in the supplemental handout.

Benchmark #1: Research Topic. In the first few weeks of class, students should submit a brief explanation of a topic area in which they would like to work. The instructor will try to review these in a timely manner, offering suggestions where possible, to help students meet the second benchmark.

Benchmark #2: Research Question and Data. Students should narrow their research topic to a specific research question that they hope to answer. It is crucial that students find data ahead of time to make sure that the question can be answered empirically – using data – within the time constraints of this course. In other words, do not plan to create and administer a survey, code the data, and analyze the data within the confines of the semester unless you have already begun the process. Students should submit the one- or two-sentence research question in Canvas and upload the data by the deadline. For some students, this will be the most difficult component of the project. If you have questions or need advice, do not hesitate to contact the instructor (adelmond@utm.edu).

Benchmark #3: Rough Draft and Preliminary Code. Students must submit a rough draft of the paper as well as the preliminary code for whatever software package the student has selected (so that the instructor can replicate the econometric analysis) by the deadline. The goal here is to allow the instructor to observe each student's progress and to help guide each student toward a more robust analysis and a better overall paper.

Benchmark #4: Final Draft and Code. Students must submit a final draft and final code that incorporate the instructor's feedback from the initial submission of the rough draft and preliminary code. The final draft and code are due by the deadline.

Exam Dates (subject to change):

Exam 1	Week 5, Sept. 18–24
Exam 2	Week 10, Oct. 23–29
Exam 3	Week 15, Nov.27–Dec.3

Grading Policy:

Participation	25%
Assignments	25%
Exams	25%
Research Project	25%

Course grades will be determined using the following scale:

A	90–100%
B	80–89.99%
C	70–79.99%
D	60–69.99%
F	0–59.99%

Scores will be updated on Canvas on a regular basis.

Contacting the Instructor:

Students are encouraged to ask questions via the Harmonize Q&A board in Canvas. This is important as students often have similar questions and the Q&A board provides the most efficient option for the instructor to answer questions for the entire class. You should have the option of posting questions anonymously. Students may also ask questions during office hours and by email. **If you send an email, please include “AGEC740 (OL)” in the subject line.** The instructor will usually answer all emails within one business day (unless I am away from the office). You should try to complete all assignments well in advance of deadlines in case you have questions.

Attendance Policy & Classroom Expectations:

Be Prepared: Participation is included in the course grade, so skipping discussions or readings/lectures is usually a suboptimal decision. Students are expected to complete all assigned readings. Referring to lectures, videos, and any assigned readings will give students a better understanding of the course content and make for more active and meaningful class discussions. Participation and discussion enhance student learning.

Be Professional: Each student is expected to be a positive member of and contributor to the class. Students are expected to be courteous and participate in a manner that facilitates a positive learning environment for everyone. Mutual respect and collaborative effort are essential. Regarding professional communication, emails (and written class discussions/communications) should *never* include text-like abbreviations or slang (for example, "LOL"). It is beneficial for you as a student to practice formal communication to better prepare for a professional career. An email should include a salutation or greeting, a body with proper and appropriate grammar, and a signature. Please practice formal communication with other students and certainly with all of your UTM professors!

Be Honest: In addition to the University policies outlined below, I include a comment on honesty. While I do not expect to have any issues in this class, instances of cheating have generally been on the rise since the beginning of the COVID-19 pandemic.

Cheating. Cheating will not be tolerated in this course. This includes acquiring answers, using "cheat sheets," cell/smart phones, or providing answers to others during examinations or assigned work, unless otherwise specified by the instructor.

Plagiarism. Presenting work or ideas of another individual without giving credit and proper documentation is plagiarism. According to Richard L. Saunders from the UTM Paul Meek Library, "Plagiarism is using others' ideas or words without clearly acknowledging the source. Boiled down, plagiarism means passing off someone else's work or ideas as your own, whether or not the source is identified. Copying all or part of a Website, document, or presenting an image without a correct citation, constitutes plagiarism." Consult the following Website if you have questions about plagiarism: <https://libguides.utm.edu/plagiarism>.

ChatGPT/AI. The use of ChatGPT and/or any other AI technology in writing (for papers, discussions, essays, assignments, exams, etc.) is strictly prohibited unless otherwise directed by the instructor. There are currently many detection options available for faculty, and some of the assignments/exams will be processed directly through a detection program. If the instructor suspects a student of using AI technology, disciplinary action will be assessed as with any other form of cheating.

Cheating, plagiarism, and the use of ChatGPT/AI are serious offenses. If you are caught doing any of these you will receive an automatic failing grade for the course and the case will be referred to the Office of Student Conduct.

Instructor Responsibilities:

The instructor agrees to be prepared, professional, respectful, honest, and fair. It is the instructor's responsibility to ensure that students have the opportunity to gain a clear understanding of the course material and to be fair and consistent in grading. The instructor agrees to be available for additional help and to be conscious of the learning pace of the class (and adapt the pace as necessary). I am here to help you! Please do not hesitate to contact me if you need extra assistance.

Disclaimer:

This syllabus may be adjusted during the semester at the instructor's discretion.

University Policies & Resources

Academic Integrity: The University of Tennessee at Martin has chosen as its primary objective quality undergraduate education. Commitment to this objective must include an obligation by all members of the University community to promote and protect the highest standards of integrity in study, research, instruction and evaluation. Dishonesty or unethical behavior does not belong at an institution dedicated to the promotion of knowledge and learning. Integrity of the academic process requires fair and impartial evaluation by faculty and honest academic conduct by students. Specific integrity attributes can be found at: <https://www.utm.edu/offices-and-services/student-conduct/academic-integrity.php>.

Standard of Conduct: When persons enroll in the University of Tennessee at Martin, they retain the rights and duties of a citizen. Additionally, they must assume the duties and observe the regulations imposed by the University community. Specific conduct attributes can be found at: <https://www.utm.edu/offices-and-services/student-conduct/>.

Disability Services: The University of Tennessee provides reasonable accommodations (academic adjustments and auxiliary aids) to ensure equal access to educational content and university programs for students with disabilities. If you have a disability that may require assistance or accommodation, or if you have questions related to any accommodations for testing, notetaking, reading, etc., please speak with the instructor as soon as possible. Students who are eligible for and who request accommodations through the Office of Disability Services must provide instructors with a **letter of accommodation** (sent directly from the Student Success Center). If you need a letter of accommodation for the semester or if you think you may have a learning disability, contact Wendy Elliott in the the Accessibility Resource Center located in the Student Success Center, 206 Clement Hall, (731) 881-7195 (<https://www.utm.edu/offices-and-services/accessibility-resource-center/>).

Emergency Alerts: Though the probability of incurring a campus emergency is minimal, students are encouraged to familiarize themselves with various emergency alerts and evacuation procedures in case of emergency. University alerts and guidelines are available

at: <https://www.utm.edu/offices-and-services/public-safety/rave-alert-text-messaging-opt-in-procedures.php> (Emergency Response Plan at https://www.utm.edu/offices-and-services/environmental-health-and-safety/_media/Emergency%20Response%20Plan%20-%20MASTER_Media%20Version.pdf).

Non-Discrimination Statement: The University of Tennessee at Martin is an equal employment opportunity institution and does not discriminate based upon race, color, or national origin. The University's Office of Equity and Diversity has adopted a policy and procedures to provide students and employees, who feel that they have experienced discrimination but are uncertain as to whether a complaint is justified or whether they wish to initiate a formal complaint, the opportunity to discuss their concerns confidentially and informally with the Equity and Diversity Officer/Title VI Coordinator for prompt and equitable resolution of discrimination complaints.

All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee at Martin affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Equity and Diversity, 544 University Street, #303, Martin, TN 38238, telephone 731-881-3505. The ADA Coordinator at the Office of Equity and Diversity can be found at <https://www.utm.edu/offices-and-services/office-of-equity-and-diversity/>.

Useful Resources:

The **Hortense Parrish Writing Center** (<https://www.utm.edu/offices-and-services/hortense-parrish-writing-center/>) offers free, non-credit, tutorial instruction to UTM students who need help with any stage of the writing process, including brainstorming, outlining, organization, drafting, revision, research, creative writing, source citation, and grammar. Walk-in and virtual tutoring appointments (via Zoom) are available, so feel free to stop by their office located at 209 Andy Holt Humanities Building, or send them a virtual-tutoring appointment request (owl@utm.edu). Questions can be sent to the same email address or you can call (731) 881-7277.

The Paul Meek Library (<https://www.utm.edu/academics/library/>) is an excellent resource for students with skilled staff available to help students find what they need.

In addition to your department faculty advisor, the University offers Student Support Resources (<https://www.utm.edu/offices-and-services/student-success-center/transfer-student-support-services.php>), including help and information on registration, fees, financial aid, and student health and counseling services. You are welcome to talk with your faculty advisor or any instructor regarding issues you may be facing.

Lauren's Promise: I will listen and believe you if someone is threatening you.

Lauren McCluskey, a 21-year-old honors student athlete and the daughter of my PhD committee chair, was murdered on Oct. 22, 2018, by a man she briefly dated on the University of Utah campus. We must all take action to ensure that this never happens again.

If you are in immediate danger, call **911** or the appropriate emergency services number for your area.

If you are experiencing sexual assault, domestic violence, and/or stalking, please report it to me and I will connect you to resources or call the Tennessee Domestic Violence Hotline at (800) 356-6767, WRAP (Women's/Men's Resource and Rape Assistance Program) at (800) 273-8712, or Pathways Crisis Hotline (800) 372-0693.

Any form of sexual harassment or violence will not be tolerated at the University of Tennessee at Martin. UTM has instituted procedures to respond to violations of these laws and standards, programs aimed at the prevention of such conduct, and intervention on behalf of the victims.***

UTM police officers will treat victims of sexual assault, domestic violence, and stalking with respect and dignity. Confidentiality is of the utmost importance and UTM police will assist by providing resources to victims. In addition to its law enforcement efforts regarding sexual assault, domestic violence, and stalking, UTM police refer victims to the appropriate university and/or local community counseling and other resources devoted to assisting victims.

Advocates help survivors determine their own needs in regard to their physical and emotional health, reporting options, and academic concerns. They connect survivors to campus and community services, and provide accompaniment to important appointments (court, hospital, and police) and support throughout the process. UTM police can also connect you with advocacy services, if desired. A local advocacy group is <https://www.tnvoicesforvictims.org/>.

Other confidential resources include UTM [Student Health and Counseling Services](#). Information shared with UTM counselors will not be provided to UTM police without expressed permission from you. If you are an online student and cannot arrange counseling services at the UTM campus, I would be happy to help you gain access to similar services in your area.