

Course Objectives/Student Learning Outcomes

By the end of the course, students should gain an understanding of the problems that inherently arise from business and economic data and how to address them. They should obtain the necessary knowledge and skills to be able to critically assess the work in the literature, and apply the techniques to their own analysis/research. They should be able to formulate and estimate a model, state and test hypotheses of interest, interpret and use the results of the model for economic and business analysis. They should be able to implement the basic steps for carrying out an empirical analysis, which is desirable to many employers, such as government agencies, business firms, and universities. Participants are expected to develop knowledge and competencies needed to contribute to data analysis in public (government agencies, central banks, cities) and private/business fields (consulting, transportation, financial, energy, health).

Prerequisites: Prerequisite: Graduate Standing

Recommended Textbooks

Greene, W. *Econometric Analysis*. 5th Ed. Prentice Hall Co. 2003 (G).

Wooldridge, J. M. *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2002 (WJ).

Gujarati, D. N. *Basic Econometrics*, McGraw-Hill, 3rd Edition, 1995 (GD).

Hamilton, L. C. *Statistics with Stata*, Brooks/Cole, 2004 (H).

Required Textbook

Wooldridge, J. M., *Introductory Econometrics: A Modern Approach*, South-Western College Publishing, 3rd, 4th, or 5th edition (W).

Although this is the textbook that we will follow, the lectures will also be based on some of the articles in the economics and business literature. Throughout the semester, I will assign required readings and the articles for which you need to write a report. I will post this information on the class conference. **I do not always stick to the book. You are responsible for all material, including topics covered in class that are not in the book or are treated differently from the book.** We will review the background statistical tools. They are also available in the appendices of the text for your own reading.

Course Schedule/Outline

(Note that this is a tentative schedule subject to modification during the course of the semester. If any changes are made they will be announced in advance.)

| Topics |
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| Course Overview and Motivation (Ch. 1) |
| Review of Basic Statistics |
| Simple Regression Model (Ch. 2) |
| Multiple Regression Analysis (Cross-Section): Estimation (Sec. 3.1, 3.2, 3.3, 3.4, 3.5, App. 3a) |
| Multiple Regression Analysis: Inference (Sec. 4.1-4.5) |

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| Multiple Regression Analysis (Cross-Section): Asymptotics (Ch. 5) |
| Multiple Regression Analysis (Cross-Section): Further issues (Sec. 6.1-6.4) |
| Multiple Regression Analysis (Cross-Section): Binary/Dummy variables (Sec. 7.1-7.6) |
| Heteroskedasticity (Sec. 8.1-8.4) |
| Specifications and Data Problems (Sec. 9.1-9.4) |
| Serial Correlation (Sec. 10.1-10.5) |
| Specification and Data Problems: Multicollinearity (Ch. 10) |
| Correlation Versus Causation: Endogeneity (Sec. 3.3,15.1,15.2, 15.3,15.5) |
| Limited Dependent Variable Models: Linear Probability Model (Sec. 7.5 and 17.1-17.5) |
| Pooling Cross Sections Across Time/Panel Data Methods: Least Square Dummy Variable Model |

Descriptions of Examinations and Major Assignments

Exam – The examination tests both your understanding of the concepts studied in the course and your ability to apply them to problem situations. Use of electronic calculators is expected, but computational methods must be clearly indicated in your answers for homework, in-class applications, and examination. If you have conflicts with the exam date contact me immediately (prior to the exam dates). Missed exam will be given a grade of zero unless adequate evidence is presented, preferably before the exam, that missing the exam cannot be avoided.

Term Project – The term project involves posing a problem, collecting or obtaining an appropriate data set, conducting an econometric analysis, and writing the results in the form of a short research paper. Participants are free with instructor consent to choose a topic of personal interest within their own field. You are free to use this as an opportunity to get started on or extend some of your own research. You are asked to work in groups of 2 or 3. To ensure timely progress, I will set up two deadlines for submission of: (1) a preliminary paper proposal that describes the problem statement, literature review and the data set to be used for early comment, and (2) the final version of your manuscript. I envision the proposal to be about 1-3 pages and the final draft 10-25 pages, double-spaced. The proposal is due **October 23**. The final paper is due **November 27**. I will give you a more detailed description of the project during the semester, but at this point I suggest you start thinking about topics that you would like to address. Throughout the term we will discuss various topics that hopefully will trigger ideas of your own.

Problem Sets/Homework – There will be problem sets assigned as homework. Use of the real data sources, such as Compustat/WRDS and World Development Indicators, will be expected for few assignments. The class will have access to the WRDS, which provides access to COMPUSTAT, CRSP, IBES, NYSE-TAQ, Bureau van Dijk, Global Insight, OptionMetrics and many other good data sets. Students can access this data using the user id and password that I will provide. You can connect to the WRDS and WDI databases by visiting the library databases at <http://www.uta.edu/library/databases>. The purpose of these assignments is to aid in learning applications of econometric methods to problem situations and to provide an opportunity for individual feedback

regarding the applications of concepts and models involved. Failure to hand-in homework on time will merit a grade of zero, unless prior arrangements have been made.

Computer Applications -Use of the econometric software of your choice, such as GAUSS, OX, STATA, SAS, and TSP, will be expected for the assignments. I will provide instructions for the use of STATA and EXCEL. I also plan to provide some instructions for the use of SAS and R this year. There are also extensive web-based tutorials on the use of EXCEL, STATA, R, and SAS for regression analysis. If you would like to obtain a copy of STATA for your own use, you may order it through the StataGradPlan(<http://www.stata.com/info/order/new/edu/gradplan.html>). These assignments allow you to consolidate and apply the concepts and techniques discussed in the class.

Verbal Reports and Class Discussion -You will also be expected to discuss some assigned articles in class. You will write reports (a maximum of 1 single-spaced typed page) and then discuss them verbally in class. *A randomly chosen participant(s) will be asked to summarize the paper for about 3 minutes. The papers will be announced ahead of time.*

Understanding of some papers comes only through detailed written analysis. Verbal reports also help ensure adequate understanding of the material. A verbal report is a structured evaluation and overview of a paper. Although many formats are effective, a possible format for the verbal report will be provided. Feel free to use this form or to develop your own form. You are expected to come to class prepared for discussion, having read the assigned paper(s).

Group Assignments

You will be asked to form a group of no more than three people during the first week of class. Please have one of the group members email me with the names of the members. Group assignments include the homework assignments, verbal reports, and a term project.

Blackboard

I will use Blackboard, an electronic learning software platform, for the distribution of course information. There are detailed instructions on the use of Blackboard that can be accessed at <http://www.uta.edu/blackboard/index.html>. Be sure to check it on a regular basis for announcements, lecture notes, case studies, data sets, assignments, and other material related to class.

Attendance

The class meets from 7:00 to 9:50 pm. There will be two sessions of about 80 minute. A 10 minute break in between will be given. Attendance is not mandatory but you are virtually guaranteed to do poorly if you skip classes. **I do not always stick to the book. You are responsible for all material, including topics covered in class that are not in the book or are treated differently from the book.**

I will not factor attendance at class meetings into the grade, but attendance is strongly encouraged. At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance.

Grading

The grade in the course will be based on reports and weekly problem sets (18%), a term project (8%), a midterm exam (34%), and a comprehensive final exam (40%). The grading scheme is as follows. 90-100% (A); 78-89.9% (B); 70-77.9% (C); 60-69.9% (D); < 59.9% (F).

Expectations for Out-of-Class Study

Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 18 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Make-up Exams

Missed exam will be given a grade of zero unless adequate evidence is presented, preferably before the exam that missing the exam cannot be avoided.

Participant-Faculty Communication

You are expected to come to class prepared by reading and doing relevant assignments prior to class. You are expected and encouraged to ask questions and participate in class discussions. Your ideas, comments, suggestions, questions, etc. are always welcome. You can drop by my office anytime if you have any questions or concerns. You may come during office hours, or schedule an appointment because I may not be there all the time. I can also be reached through email or voice mail. I endeavor to create an atmosphere that is favorable for learning through the encouragement of creativity, self-initiative, and dialogue. You are encouraged to ask questions in order to stimulate discussion and enhance understanding. **Please do not hesitate to see me if you have difficulty with the course material or need to discuss something with me.** I look forward to working with you this semester.

Grade Grievances

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog. See the information at <http://www.uta.edu/gradcatalog/2012/general/regulations/#grades>.

Drop Policy

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the

University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aaofao/>). **Note that drops are not allowed after the official last day to drop.**

Americans with Disabilities Act

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity

Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents' Rule 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey

At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located [insert a description of the nearest exit/emergency exit]. When exiting the building during an

emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Useful Library Links

- Library Home Page.....<http://www.uta.edu/library>
- Subject Guides<http://libguides.uta.edu>
- Database List.....<http://www-test.uta.edu/library/databases/index.php>
- Course Reserves.....<http://pulse.uta.edu/vwebv/enterCourseReserve.do>
- Library Catalog.....<http://discover.uta.edu/>
- E-Journals<http://utalink.uta.edu:9003/UTAlink/az>
- Library Tutorials<http://www.uta.edu/library/help/tutorials.php>
- Connecting from Off- Campus<http://libguides.uta.edu/offcampus>
- Ask A Librarian<http://ask.uta.edu>
- Business Library.....<http://www.uta.edu/library/ebl/>

| Important Dates |
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| First Day of Semester: Thursday, August 21 |
| Labor Day Holiday: Monday, September 1 |
| Thanksgiving Break: Thursday-Friday, November 27-28 |
| Last Day of Classes: Wednesday, December 3 |
| Midterm Exam: Thursday, October 16, in class |
| The proposal is due Thursday, October 23 |
| Last Day to Drop: Wednesday, October 29 |
| The final paper is due Thursday, November 27 |
| Final Exam Dates: December 6-12 |
| Final Exam: Thursday, December 11, 8:15-10:30 PM, in class |