

**Syllabus** 

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SYLLABUS: ECON 5341 - Advanced Economic Data Analytics

## Advanced Economic Data Analytics

**ECON 5341** 

**Syllabus** 

#### **Instructor Information**

- Prof. William J. Crowder, PhD, Economics
- Office: 321 Business Building
- E-mail: crowder@uta.edu
- · Web page: http://www.uta.edu/faculty/crowder/
- · Office Hours: by appointment.

#### **Textbook**

There is no required textbook for the course. But it is highly recommended that you have an advanced econometrics text for reference. Suitable examples are Greene, Davidson and MacKinnon and Fomby, Hill and Johnson. Bruce Hansen has made his Econometrics textbook free on line here...

#### **Prerequisites**

This is the capstone course in the MS. Economic Data Analytics program. It is assumed that every student has had two courses in econometrics and micro- and macro-theory.

## **Grading**

Grades will be based on five homework projects and one in-class presentation. .

#### **POINTS:**

Assignment	Points	Due Dates and Suggested Dates	
Homework #1	100	Due: September 24, 2017	Suggested: September 10, 2017
Homework #2	100	Due: October 15, 2017	Suggested: October 1, 2017
Homework #3	100	Due: November 5, 2017	Suggested: October 29, 2017
Homework #4	100	Due: November 26, 2017	Suggested: November 15, 2017
Homework #5	100	Due: December 10, 2017	Suggested: November 26, 2017
Presentation and Replication Paper	500		
Total	1000	Possible points	

#### SCALE:

100-90% A 89-80% B 79-70% C 69-60% D Below 60% F

#### **Course Requirements**

**Homeworks:** The homeworks represent applied problem sets in econometrics and data analytics. To get full credit on each homework assignment the following must be completed:1) The answer to each part of the assignment must be written neatly with supporting evidence. The supporting evidence comes from the results of the econometric exercises which form the basis of the homeworks. The evidence should be presented in a neat and professional manner using tables and graphs when appropriate. 2) This class is also about learning how to code your analytics programs using GAUSS, MatLab, SAS, R, etc. All homework projects must be coded and the code must be turned in with the written part of the assignment. You are strongly encouraged to use R as your coding platform, but it is not required.

**Replication Project and Presentation:** This course has one primary purpose; to give students practical experience in data analysis. My experience has taught me that one of the best ways to get this hands-on training while still inexperienced in model building, specification testing, interpretation/revision and forecasting, is to replicate the work of a more experienced analyst.

All assignments must be completed and returned to the instructor by the due date. NO late assignments will be accepted!

You are strongly encouraged to follow the suggested timeline for the course.

#### **Feedback**

Written assignments will be graded and returned within 10 work days of submission.

Instructor response to e-mail will be within 48 hours.

## **Course Desciption**

This course is the capstone in the Applied Economic Data Analytics Masters Degree program. The goal of the course is to provide instruction on the practice of applied data analysis. This is achieved through a series of lectures and homework projects designed to prepare the student for an independent project on data analytics. Conducting economic analisys requires a series of procedural steps that begins with problem identification and ends with a written/oral report of the results and conclusions of the analisys. Learning this process is facilitated by conducting a series of replications of published research in Economics, Finance and other business disciplines. The final project requires each student to perform a replication of a published article, of their own choosing, that uses methods from Econometrics I/II, Forecasting and/or Time Series. The course concludes with student presentations, along with submission of a written report summarizing the replication effort and detailing the results.

#### **Attendance**

At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. 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. Attendance will not be taken as part of the grading procedure. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

### **Non-Payment of Fees Policy**

Students who have not paid their fees by the census date and are dropped for non-payment cannot receive a grade for the course under any circumstances. Emergency loans are available from the Financial aid Office.

## **Academic Integrity**

Students enrolled all UT Arlington courses 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 in their courses by 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. Additional information is available at <a href="https://www.uta.edu/conduct/">https://www.uta.edu/conduct/</a>.

#### **Students with Disabilities**

UT 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), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. 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 disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) <u>www.uta.edu/disability</u> or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at <u>www.uta.edu/disability</u>.

Counseling and Psychological Services, (CAPS) <u>www.uta.edu/caps/</u> or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

#### **Grade Grievances**

You have one calendar year from the date the grade is assigned to initiate any grievance. The normal academic channels are 1) the course instructor, 2) department chair, 3) academic dean, and 4) the Provost.

#### **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 <a href="http://www.uta.edu/oit/cs/email/mavmail.php">http://www.uta.edu/oit/cs/email/mavmail.php</a>.

## **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 (<a href="https://wwweb.uta.edu/aao/fao/">http://wwweb.uta.edu/aao/fao/</a>).

#### **Student Feedback Survey**

At the end of each term, students enrolled in face-to-face and online classes categorized as "lecture," "seminar," or "laboratory" are 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 via the SFS database is aggregated with that of other students enrolled in the course. Students' anonymity will be protected to the extent that the law allows. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <a href="http://www.uta.edu/sfs">http://www.uta.edu/sfs</a>.

## **Non-Discrimination Policy**

The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit <u>uta.edu/eos</u>.

The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit <a href="www.uta.edu/titleIX">www.uta.edu/titleIX</a> or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or <a href="misconditaleduc.">imhood@uta.edu</a>.

## **Campus Carry**

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <a href="http://www.uta.edu/news/info/campus-carry/">http://www.uta.edu/news/info/campus-carry/</a>

## **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 http://www.uta.edu/universitycollege/resources/index.php.