

## *Course Syllabus*

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### **Course Information**

*ECO 6336 /POEC 7319*

*Economics of Education*

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### **Professor Contact Information**

*Rodney Andrews*

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*Office Hours: 1:00 PM – 3:30 PM on Wednesday and by appointment*

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### **Course Pre-requisites, Co-requisites, and/or Other Restrictions)**

Students should be comfortable with microeconomics. Students should be able multivariate regression techniques. A basic knowledge of probability and statistical inference is required. I also require students to be critical and inquisitive, to ask questions. I expect students to read the assigned papers, understand what the authors are trying to do, and decide whether or not they were successful. In this class, students are expected to formulate research questions.

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### **Course Description**

The title of the course is broad. We will read and discuss good empirical papers that address important questions concerning important questions in educational policy. We will discuss the theoretical underpinnings of the questions when appropriate. The course will mainly concern how applied microeconometrics is used to answer interesting questions, with an emphasis on question formulation and identification. Some of the most creative and controversial applied work concerns educational topics, so students will have to familiarize with the methods that economists have used to overcome endogeneity.

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### **Student Learning Objectives/Outcomes**

**Upon completing this course, I expect students to be able to critique research concerning education, formulate their own research questions, and bring the appropriate economic and econometric techniques to bear on the problem. The choice of appropriate technique in modern empirical economics, depends on the assumptions that are made, so in this course, we ultimately will focus on those critical assumptions.**

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## Required Textbooks and Materials

**We will read a number of articles, many of which are available online through the National Bureau of Economic Research (NBER) website, the IZA website, or via the resources available through McDermott Library, such as JSTOR.**

The following suggested course materials are a set of resources that scholars should have access to.

## Suggested Course Materials

A Good Microeconomics Text:

1. Microeconomic Theory by Mas Colléll, Whinston, and Green
2. Microeconomic Analysis by Hal Varian
3. Advanced Microeconomic Theory by Jehle and Reny

A Good Labor Text:

1. Labor Economics (Fifth Edition) by George Borjas
2. Modern Labor Economics by Ron Ehrenberg and Robert Smith

A Good Public Finance Text:

1. Fundamentals of Public Economics by Jean-Jacques Laffont
2. Public Finance: A Normative Theory by Richard Tresch
3. The Theory of Externalities, Public Goods and Club Goods by Richard Cornes and Todd Sandler

And most importantly, a good econometrics text:

1. Microeconometrics: Methods and Applications by Colin Cameron and Pravin Trivedi
2. Mostly Harmless Econometrics by Joshua Angrist and Steve Pischke
3. Econometric Analysis of Cross-Sectional and Panel Data by Jeffrey Wooldridge
4. Econometric Theory and Methods by Russell Davidson and James MacKinnon
5. An Introduction to Classical Econometric Theory by Paul Ruud

A handy book to have around:

Human Capital (Third Edition) by Gary S. Becker

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## Assignments & Academic Calendar

*\*Note: The readings with asterisks are required. The others are suggestions to make you aware of other research that pertains to the topic.*

**1/10 Lecture 1: Introduction and discussion of course expectations.**

## **1/13 Lecture 2: A review of regression and discussion of the issues of identification.**

Imbens, Guido W., and Jeffrey M. Wooldridge (2009) "Recent Developments in the Econometrics of Program Evaluation" *Journal of Economic Literature*, 47(1) Pages 5--86

The Imbens and Wooldridge (2009) paper is a compendium of econometric tools that modern empirical researchers should be familiar with.

Angus Deaton (2009) Instruments of Development: Randomization in the tropics, and the search for the elusive keys to economic development" NBER Working Paper w14690

James Heckman and Sergi Urzua "Comparing IV with Structural Models: What Simple IV Can and Cannot Identify" NBER Working Paper w14706

Guido Imbens (2009) Better LATE Than Nothing: Some Comments on Deaton (2009) and Heckman and Urzua (2009)" NBER Working Paper w14896

The Deaton (2009) paper, Heckman and Urzua (2009) paper, and Imbens (2009) paper flesh out the recent empirical debate. You should be aware of the content of all three papers.

## **1/20, 1/25, and 1/27 Private Returns to Education (Think carefully about the assumptions needed for identification.)**

\*1. J. Angrist and A. Krueger (1991) "Does Compulsory School Attendance Affect Schooling and Earnings?" *Quarterly Journal of Economics*, pp. 979-1015.

\*2. Kasey Buckles and Fan Hungerman (2008) "Season of Birth and Later Outcomes: Old Questions, New Answers" NBER Working Paper

\*3. Ashenfelter, O and A. Krueger (1994) "Estimates of the Economic Returns to Schooling from a New Sample of Twins," *American Economic Review*. Vol. 84.5 (December), pp. 1157-73.

E. Duflo. (2001) "Schooling and labor market consequences of school construction in Indonesia: Evidence from an unusual policy experiment," *The American Economic Review*, Vol. 91, No. 4 (Sep., 2001), pp. 795-813

Z. Griliches. (1977) "Estimating the Returns to Schooling: Some Econometric Problems." *Econometrica*, Vol. 45.1 (January), pp. 1-22.

Card, D. 2001 "Estimating the Return to Schooling: Progress on some Persistent Econometric Problems" *Econometrica* 69(5): 1127-1160.

## **2/1 and 2/3 Public Returns to Education (Why should the public, tax-payers, subsidize education?)**

\*1. Thomas Dee "Are There Civic Returns to Education?" *Journal of Public Economics* 88(9), August 2004, pages 1697-1720.

\*2. James J. Heckman & Dimitriy V. Masterov, 2007. "The Productivity Argument for Investing in Young Children," Review of Agricultural Economics, American Agricultural Economics Association, vol. 29(3), pages 446-493, 09.

Enrico Moretti & Lance Lochner, The Effect of Education on Criminal Activity: Evidence from Prison Inmates, Arrests and Self-Reports, American Economic Review, 94(1), 2004.

Enrico Moretti: Estimating the Social Return to Higher Education: Evidence From Cross-Sectional and Longitudinal Data, Journal of Econometrics, 121(1-2), 2004.

Enrico Moretti Workers' Education, Spillovers and Productivity: Evidence from Plant-Level Production Functions, American Economic Review, 94(3), 2004

Moretti, Enrico, Kevin Milligan, and Philip Oreopoulos, "Does Education Improve Citizenship? Evidence from the U.S. and the U.K.," Journal of Public Economics, Vol. 88, No. 9-10, 2004, pp. 1667 – 1695.

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## **2/8 and 2/10 Education as a signal**

\*1. Weiss, Andrew. 1995. "Human Capital vs. Signaling Explanations for Wages," Journal of Economic Perspectives, Vol. 9, No. 4, pp. 133—154.

\*2. J. Betts, (1998) "The Impact of Educational Standards on the Level and Distribution of Earnings," American Economic Review, Vol. 88.1 (March), pp. 266-75

Michael Spence Job Market Signaling The Quarterly Journal of Economics, Vol. 87, No. 3 (Aug., 1973), pp. 355-374 (**This is the theory paper that formalized the signalling issue.**)

Peter Arcidiacono, Patrick Bayer, A. Hizmo. (2007) "Beyond Signaling and Human Capital: Education and the Revelation of Ability" NBER Conference Paper

R.J. Murnane, J.H. Tyler, and J.B. Willet. (2000) "Estimating the Impact of the GED on the Earnings of Young Dropouts Using a Series of Natural Experiments." Quarterly Journal of Economics, Vol. 115.2 (May), 431-468.

## **2/15 and 2/17 Do School inputs matter?**

\*1. Hanushek, Eric A. 1986. "The Economics of Schooling: Production and Efficiency in Public Schools." Journal of Economic Literature. Vol. 24, No. 3, pp. 1141—1159.

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\*2. Card, David and Alan Krueger. 1996. "School Resources and Student Outcomes: An Overview of the Literature and New Evidence from North and South Carolina." *Journal of Economic Perspectives*, Vol. 10, No. 4, pp. 31-50

\*3. Card, D. and Krueger, A. "School Quality and Black-White Relative Earnings: A Direct Assessment." (February 1992a), *Quarterly Journal of Economics*.

Card, D. and Alan B. Krueger "Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States" *The Journal of Political Economy*, Vol. 100, No. 1 (Feb., 1992b), pp.1-40.

Krueger, Alan, "Experimental Estimates of Education Production Functions," NBER Working Paper No. 6051, 1997.

### **2/22 and 2/24 School type (Charter Schools, Private Schools, and the like)**

\*1. Atila Abdulkadiroglu, Joshua Angrist, Susan Dynarski, Thomas J. Kane, and Parag Pathak. (2009) "Accountability and Flexibility in Public Schools: Evidence from Boston's Charters and Pilots" NBER Working Paper 15549

\*2. Neal, Derek, 1997. "The Effects of Catholic Secondary Schooling on Educational Achievement," *Journal of Labor Economics*, University of Chicago Press, vol. 15(1), pages 98-123, January

Evans, William, and Robert Schwab (1995). "Finishing High School and Starting College: Do Catholic Schools Make a Difference?" *Quarterly Journal of Economics* 110 (4):941-974.

Gould E., Lavy V. and Passerman D. "Immigrating to Opportunity: Estimating The Effect of School Quality Using A Natural Experiment on Ethiopians in Israel" (May 2004), *Quarterly Journal of Economics*.

Hoxby, C., and J Rockoff. (2004) "The Impact of Charter Schools on Student Achievement: A Study of Students Who Attend Schools Chartered by the Chicago Charter School Foundation." Cambridge, MA: Department of Economics, Harvard University

Evans, William, and Robert Schwab (1995). "Finishing High School and Starting College: Do Catholic Schools Make a Difference?" *Quarterly Journal of Economics* 110 (4):941-974.

"The Effects of Catholic Schooling on Civic Participation" *International Tax and Public Finance* 12(5), September 2005, 605-625.

### **3/1 and 3/3 What are the effects of class size?**

\*1. A. B. Krueger. (1999) "Experimental Estimates of Education Production Functions." Quarterly Journal of Economics, Vol. 114.2 (May), pp. 497-532.

\*2. Joshua D. Angrist & Victor Lavy, 1997. "Using Maimonides' Rule to Estimate the Effect of Class Size on Student Achievement," NBER Working Papers 5888, National Bureau of Economic Research, Inc.

C. Hoxby. (2000) "The Effect of Class Size on Student Achievement: New Evidence from Natural Population Variation," Quarterly Journal of Economics, Vol. 115.4 (November), pp. 1239-1285

E.A. Hanushek. (1999) "The Evidence on Class Size." in S.E. Mayer and P.E. Peterson, eds. Earning and Learning: How Schools Matter. Washington D.C.: Brookings Institution Press/Russell Sage.

### **3/8 and 3/10 Do teachers matter?**

\*1. J. Rockoff. (2004) "The Impact of Individual Teachers on Student Achievement: New Estimates from Panel Data," American Economic Review, Vol. 94.2.

\*2. "Teachers, Schools, and Academic Achievement" (with Steven G. Rivkin and John F. Kain) *Econometrica* 73(2), March 2005, pp. 417-458.

Bettinger, Eric and B. T. Long. (2005) "Do Faculty Members serve as Role Models? The Impact of Faculty Gender on Female Students." American Economic Review, vol. 95, no. 2

"Teacher Quality" (with Steven G. Rivkin) in Eric A. Hanushek and Finis Welch (ed.), Handbook of the Economics of Education. Amsterdam: Elsevier, pp. 1051-1078.

Dee, T. (May 2005) "A Teacher Like Me: Does Race, Ethnicity or Gender Matter?" American Economic Review 95(2), pages 158-165.

Brewer, D., and R. Ehrenberg. (1994, March). "Do school and teacher characteristics matter? Evidence from High School and Beyond." Economics of Education Review, 13(1), 1-17. (EJ 483 386).

Brewer, D., and D. Goldhaber. (2000). "Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement." Educational Evaluation and Policy Analysis, 22(2), 129-145.

### **3/22 and 3/24 School Choice and School Competition.**

\* 1.Hoxby, Caroline M., "Does Competition Among Public Schools Benefit Students and Taxpayers?" American Economic Review, 90(5), 2000.

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\*2. Angrist, J. E., Bettinger, E., Bloom, E., King, Kremer, M., "Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment," American Economic Review, December 2002.

Rothstein, Jesse M., "Does Competition among Public Schools Benefit Students and Taxpayers? Comment," Mimeo, February 2004.

Hoxby, Caroline M., "Competition among Public Schools: A Reply to Rothstein (2004)," NBER WP, 11216.

Rouse, C. E., "Private School Vouchers and Student Achievement: an Evaluation of the Milwaukee Parental Choice Program," Quarterly Journal of Economics, 1998: 118, 553–602.

Cullen, J. B., Jacob, B.A., and Levitt, S.D., "The Impact of School Choice on Student Outcomes: An Analysis of the Chicago Public Schools," Journal of Public Economics, 2005. 89(5-6): 729-760.

### **3/29 and 3/31 Gender and Peer effects**

\*1. Sacerdote, B. "Peer Effects with Random Assignment: Results for Dartmouth Roommates." (2001), Quarterly Journal of Economics, 116 (2): 681 - 704.

\*2. "Does School Integration Generate Peer effects? Evidence from Boston's Metco Program," (with Kevin Lang), The American Economic Review, December 2004.

Hastings, Justine S., Thomas J. Kane and Douglas O. Staiger "Gender and Performance: Evidence from School Assignment by Randomized Lottery", American Economic Review 96(2), pp. 232-236

Emmanuel Jimenez and Marlaine E. Lockheed "Enhancing Girls' Learning Through Single-Sex Education: Evidence and a Policy Conundrum" Educational Evaluation and Policy Analysis, Vol. 11, No. 2, 117-142 (1989)

### **4/5 and 4/7 Racial/Ethnic differences in academic performance**

\*1. "Are High Quality Schools Enough to Close The Achievement Gap? Evidence from a Social Experiment in Harlem?" Will Dobbie and Roland Fryer Jr. NBER Working Paper: 15473

\*2. Roland G. Fryer and Steven D. Levitt "Testing for Racial Differences in the Mental Ability of Young Children" NBER Working Paper 12066 (Forthcoming in American Economic Review)

"Understanding the Black-White Test Score Gap in the First Two Years of School" Roland Fryer and Steven D. Levitt, The Review of Economics and Statistics, May 2004

Hauser R., (1993) "Trends in College Entry among Blacks, Whites, and Hispanics." In Studies of Supply and Demand in Higher Education, edited by Charles T. Clotfelter and Michael Rothschild. Chicago: Univ. Chicago Press

The Black-White Test Score Gap Christopher Jencks and Meredith Phillips, editors

"The Dynamics of Educational Attainment for Blacks, Whites and Hispanics," James Heckman S. Cameron, Journal of Political Economy, (June 2001), 109(3), 455-499.

#### **4/12 and 4/14 The effects of Tracking**

\*1. "Peer Effects, Teacher Incentives, and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya" by Pascaline Dupas, Esther Duflo, and Michael Kremer NBER Working Paper 14475

\*2. Betts, J. R., and Shkolnik, J. L. (1999) "Key difficulties in identifying the effects of ability grouping on student achievement" Economics of Education Review, Volume 19, Issue 1, Pages 21-26.

Betts, J. R., and Shkolnik, J. L. (1999) "The effects of ability grouping on student math achievement and resource allocation in secondary schools. Economics of Education Review", 19, 1-15

#### **4/19 and 4/21 Remediation**

\*1. The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach: Addressing Endogenous Sorting and Noncompliance Juan Carlos Calcagno, Bridget Terry Long NBER Working Paper No. 14194\*

\*2. McFarlin, Isaac Jr., and Paco Martorell. 2007. ["Help or Hindrance? The Effects of College Remediation on Academic and Labor Market Outcomes."](#)

Bettinger, Eric and B. T. Long. (forthcoming 2009) "Addressing the Needs of Under-Prepared College Students: Does College Remediation Work?" Journal of Human Resources.

#### **4/26 and 4/26 TBD**

#### **5/3 and 5/5 TBD**

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### **Grading Policy**

6-7 Referee Reports 30%

Weekly Research Question 10%

Three Five Page Research Proposals 60%

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## Course & Instructor Policies

**This is a graduate course. I expect assignments to be turned in promptly. However, if there are mitigating circumstances, then we can discuss making arrangements for tardy assignments.**

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## Technical Support

If you experience any problems with your UTD account you may send an email to: [assist@utdallas.edu](mailto:assist@utdallas.edu) or call the UTD Computer Helpdesk at 972-883-2911.

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## Field Trip Policies

### Off-campus Instruction and Course Activities

*Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address [http://www.utdallas.edu/BusinessAffairs/Travel\\_Risk\\_Activities.htm](http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm). Additional information is available from the office of the school dean. Below is a description of any travel and/or risk-related activity associated with this course.*

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## Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD printed publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Series 50000, Board of Regents, The University of Texas System*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

## **Academic Integrity**

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

## **Copyright Notice**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. As a UT Dallas student, you are required to follow the institution's copyright policy (Policy Memorandum 84-I.3-46). For more information about the fair use exemption, see <http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm>

## **Email Use**

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

## **Withdrawal from Class**

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

## **Student Grievance Procedures**

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

## **Incomplete Grade Policy**

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

## **Disability Services**

The goal of Disability Services is to provide students with disabilities equal educational opportunities. Disability Services provides students with a documented letter to present to the faculty members to verify that the student has a disability and needs accommodations. This letter should be presented to the instructor in each course at the beginning of the semester and accommodations needed should be discussed at that time. It is the student's responsibility to notify his or her professors of the need for accommodation. If accommodations are granted for testing accommodations, the student should remind the instructor five days before the exam of any testing accommodations that will be needed. Disability Services is located in Room 1.610 in the Student Union. Office hours are Monday – Thursday, 8:30 a.m. to 6:30 p.m., and Friday 8:30 a.m. to 5:00 p.m. You may reach Disability Services at (972) 883-2098.

Guidelines for documentation are located on the Disability Services website at <http://www.utdallas.edu/disability/documentation/index.html>

## **Religious Holy Days**

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

***These descriptions and timelines are subject to change at the discretion of the Professor.***