University of Texas at Austin



**Course Outline** 

# **Economics 329: ECONOMIC STATISTICS**

Fall 2019, Unique number 33735 Th 3:30 – 5:00 (BUR 106)

Instructor: Dr. Valerie R. Bencivenga Office: BRB 3.102C Office hours: T, Th 1:00-2:30 Phone: 512-475-8509 ESSENTIAL INFORMATION READ FIRST - Essential information and

## strategies for success in this course

• Web page on Canvas (link on Home Page and in the "schedule of work" module)

#### Calendar images

• Web page on Canvas (link on READ FIRST and in the "schedule of work" module)

#### 2019 Fall Teaching & Learning Plan.xlsx

 Downloadable Excel spreadsheet for students (link on READ FIRST and in the "schedule of work" module)

#### ECO 329 FALL 2019 course outline.pdf

• In the "course outline" module on Canvas

**Email:** <u>Eco329.vrb@gmail.com</u> (course email) or <u>benciven@utexas.edu</u> (UT email for confidential matters) Contact me <u>in person</u> or <u>by email</u>. Use the <u>course email</u> for most emails. Do <u>not</u> leave a phone message. Do <u>not</u> use Canvas messaging.

## **COURSE OBJECTIVES**

Economic Statistics is a first course in quantitative methods that are widely used in economics and business. The main objectives of this course are to

- explore methods for describing data
- teach students how to build and analyze probability models of economic and business situations
- introduce a variety of statistical methods used to draw conclusions from economic data, and to convey the conceptual and mathematical foundations of these methods
- lay a foundation for econometrics

### **COURSE DESCRIPTION**

**SEGMENT 1.** The unit on **descriptive statistics** covers methods for describing the distribution of data on one or more variables, including measures of central tendency and dispersion, correlation, frequency distributions, percentiles, and histograms.

In economics and business, we specify a probability model for the random process that generated the data (data-generating process, or DGP). The unit on **probability theory** covers the set-theoretic foundations of probability and the axioms of probability; rules of probability derived from the axioms, including Bayes' Rule; counting rules; and joint probability distributions. **MIDTERM #1**.

**SEGMENT 2.** Random variables are probability models of random quantities and events. We study the **binomial**, **hypergeometric**, and **Poisson distributions**, which are **discrete random variables** (used, for example, in quality control and to forecast customer arrivals). We study the **uniform** and **normal distributions**, which are **continuous random variables** (providing models of the amount of time to complete a task, or wages, for example). Random variables allow us to compute probabilities of events (for example, the probability a portfolio loses money, or the probability a bid wins in an auction).

**Sampling theory** builds probability models of the impact of randomness in the DGP on statistics we compute from data. We derive **sampling distributions** of various statistics in the context of different DGPs. The **Central Limit Theorem** sometimes allows us to derive approximate sampling distributions even when we don't know much about the DGP. <u>Part</u> of sampling theory is covered <u>before</u> Midterm #2. The remainder, including the **chi-square, Student t**, and **F distributions**, is covered <u>after</u> Midterm #2.

**SEGMENT 3.** Sampling distributions provide a basis for choosing an **estimator** of a population parameter, and they allow us to calculate **confidence intervals** from data (intervals that quantify uncertainty in our estimates of parameters of the DGP, such as the <u>true</u> mean rate of output of a production process, or the <u>true</u> variance of the rate of return on a portfolio). We also develop **hypothesis tests** for a set of DGPs. Statistical inference (estimation and hypothesis testing) about one parameter of a **single population** and about the relationship between parameters across **two populations** are considered. **FINAL EXAM.** 

### PREREQUISITES

Grades of at least C- in ECO 304K and L and in MATH 408C and D or MATH 408K and L (or the equivalent)

### **TEXTBOOK AND OTHER REQUIRED MATERIALS**

(1) The required textbook is **PROBABILITY AND STATISTICS FOR ENGINEERING AND THE SCIENCES**, **9**<sup>th</sup> **edition**, by Jay DEVORE (Cengage). (2) The web-based homework lab for the textbook, called WebAssign, also is required. WebAssign comes with the complete e-book, so you can choose whether or not to acquire a printed copy of the textbook. (3) You'll need an iClicker. (You do <u>not</u> need to be able to enter numerical answers on your iClicker. All iClicker questions are multiple choice.). We'll have for-credit clicker questions during many lectures. <u>The iClicker system does not work through wireless</u> and there is no phone app. (4) You'll need a calculator for in-class work, and for exams. Your calculator may <u>not</u> have texting or internet access, and it may <u>not</u> be capable of storing files. Otherwise, the choice of calculator is unrestricted.

You have options for acquiring the textbook and access to WebAssign.

- Option 1. Loose-leaf textbook, packaged with an access code for WebAssign + e-book (available at the UT Co-op Bookstore)
- Option 2. WebAssign access + e-book. If you decide <u>not</u> to buy a printed copy of the book, you can purchase WebAssign access on the publisher's web site, and this includes the e-book: <u>http://services.cengagebrain.com/course/site.html?id=3463770</u>
- Option 3. Cengage Unlimited may be the most cost-effective option. Certainly this is the case if more than one of your courses is using a Cengage textbook this semester, and you may prefer Cengage Unlimited anyway. The basic idea of Cengage Unlimited is that for \$119.99 you have access to all Cengage e-books (thousands of them) and digital learning platforms (such as WebAssign) for the semester. You can rent the book (\$7.99) or you can purchase the loose-leaf version of the book for a reasonable price. For details and different versions of Cengage Unlimited, see the Cengage web site.

<u>To sum up</u>: Consider Cengage Unlimited (and if you decide to go with that, either use the e-book or rent a physical text). If Cengage Unlimited is not what you want, then if you want a physical book, go with the bundle and use the access code that comes with the bundle to register for WebAssign. If you don't want a physical book (if you decide the e-book that comes with WebAssign is sufficient), choose that option on the web site above and pay with a credit card.

See the WebAssign module on Canvas for a "quick guide" (that has a tech support phone number), the web site for registering for WebAssign, and the "class key" for this semester.

### **EVALUATION**

Your course score will be based on **midterm exam #1 (15%), midterm exam #2 (25%),** a **final exam (40%), WebAssign homework (10%),** and **participation (10%).** Your course score will be computed as a weighted average, using your percentage scores on these components. A course grade will be assigned based on your course score relative to the distribution of course scores in the class. Pluses and minuses will be used.

This approach allows me to assign letter grades without an absolute scale. The percentage of students receiving any particular letter grade is not predetermined. It is possible for all students to get a C or above, and for the large majority to receive an A or a B. However, lower grades will be assigned to students who do not demonstrate proficiency or mastery of the material.

After the first midterm, I will announce tentative cutoffs (percentage scores) between A, A-, B+, etc. After the second midterm, I will update these tentative cutoffs, if necessary. Cutoffs remain tentative until course grades are assigned.

## **EXAMS**

Bring a new (unused) blue exam book to each exam, as well as a calculator. Dates and times for the exams are as follows:

Midterm #1 Mon Sep 30, 7:00 to 9:00 pm	BUR 106/seat assignments will be posted on Canvas
Midterm #2 Wed Oct 30, 7:00 to 9:00 pm	BUR 106/seat assignments will be posted on Canvas
Final exam Tue Dec 17, 2:00 pm to 5:00 pm	Confirm date and time on registrar's web site. Room/seat assignments will be posted on Canvas

Let me know <u>immediately</u> if you have a conflict that prevents you from taking either of the midterms with the rest of the class. If you have a conflict with another class or a UT event that you cannot change, I will schedule your midterm at an alternate time. Alternate exams are <u>earlier</u> in the day, or occasionally on the <u>day before</u>. We give alternate exams only to students who legitimately need them. If you do not notify me of a conflict by Friday Sep 13 at noon, you will be required to take the midterm exams at the scheduled times unless an emergency arises.

If you require an accommodation for a disability, please let me know about it as early in the semester as possible, <u>even if you don't yet have your</u> <u>accommodation letter</u> from Services for Students with Disabilities. See the section on accommodations for students with disabilities (below).

There will be <u>no makeup midterm exams</u>. If you miss a midterm due to illness, a personal emergency, or other valid reason, and if you provide me with documentation of the event, I will re-weight your other exams. An illness or emergency must be serious and unavoidable, and documented, in order for you to be excused. Otherwise, you will receive a zero for the missed exam. Contact me <u>by email</u> as soon as possible, to discuss your situation.

You must take the final exam at the scheduled time unless you have a valid, documented reason. A request to take the final exam at an alternate time should be made well ahead. If an illness or emergency prevents you from writing the final exam at the scheduled time, contact me <u>by email</u> at the earliest opportunity. If the illness or emergency is serious and unavoidable, and documented, you will receive an incomplete for the course, and a makeup final exam will be arranged, which may be during the following semester.

A <u>deadline for raising grading issues</u> will be announced after each midterm exam, together with a process for submitting a request for your exam to be regraded.

### **LECTURES**

The lectures assume you have done the reading beforehand. You are responsible for all material covered in lecture <u>and</u> in the required lecture slides (even if not covered in class). I recommend that you have the lecture slides in front of you during class, either in printed form, or on a computer, to facilitate note-taking. You can print "2 on 1" or "4 on 1" (slides per printed page), to save paper. If you find that mathematical symbols are "lost" or smudged when printing, open and print from Adobe Reader (which is free).

**Required videos.** Several lectures will be "inverted". You will view the lecture video <u>before class</u>, and class will be devoted to problem-solving and discussion. Links to the required videos are in the topic modules on Canvas. "Due dates" (i.e., "view by" dates) are on the Excel spreadsheet, which is posted on Canvas.

**Videoed lectures have InstaPoll questions.** InstaPoll questions are for-credit multiple choice questions that count toward your participation score. See the section on participation points (below).

Lectures Online. Our class uses the Lectures Online system. This system records the audio, slides, and work on the document camera <u>from the live lecture</u>, in a video, for you to review after class. Links to the videos will appear in the Lectures Online tab on the Canvas website for this course. A link will appear several hours after each lecture, problem-solving session, and review session. To view a recording, simply click on the Lectures Online tab and then click on the video. Lectures Online and the required videoed lectures are different.

**Conduct.** Leaving lecture early is distracting and disruptive both for me and for other students. Once in lecture, you are expected to stay until the end. If you don't anticipate wanting to stay until the end, it is better not to come. If you must arrive late, or leave early, I expect you to let me know ahead of time, in a brief email, or by coming up before class (or as soon as possible afterwards, if you have a last-minute emergency).

Please feel free to ask questions during lecture. Keep discussions with your neighbors to a minimum during class—even whispering is distracting to all unless we're doing an activity where discussion is encouraged (such as clicker questions). During lecture, any device you have open should be used only for lecture notes.

### PARTICIPATION POINTS (CLICKER QUESTIONS, INSTAPOLL QUESTIONS, AND CANVAS QUIZZES)

**Clicker questions.** There will be clicker questions during many lectures. Each clicker question is worth 2 points (you get one point for attempting the question, plus one point for getting it correct). NOTE – You may work in groups on clicker questions.

You <u>must</u> register your iClicker on the Eco 329 Canvas web site. <u>Do not</u> use the iClicker web site. Your iClicker must be registered separately for each of your UT courses that use iClickers. The iClicker database stores your responses according to the number on the bottom of your iClicker. Registering that number allows us to associate your iClicker number with your UT EID for all answers you give over the whole semester (including those given <u>before</u> you register your iClicker). If you have a problem registering your iClicker (including not being able to read the number on the bottom), please see the head TA, who will help you.

Clicker questions and answers are not posted on Canvas (but they are in the Lectures Online videos).

**InstaPoll questions.** Several lecture videos are required. As you are watching these videos, InstaPoll questions will "pop up". Your only opportunity to answer an InstaPoll question is when it pops up. **If you scroll past or click past an InstaPoll question, or if you continuing viewing the video without answering, you lose access to it permanently (you no longer can answer it).** You can re-watch all videos as many times as you want, however.

Two sets of multiple choice review questions also have been videoed. These videos also use InstaPolls to record your answers. See the Topic 5 and Topic 7 modules on Canvas and the Excel spreadsheet for the date each of these videos will become available.

InstaPoll questions are similar to clicker questions. Each InstaPoll question is worth 2 points and your answer is either correct (2 points) or not (0 points). NOTE – You may work in groups on InstaPoll questions.

**Canvas quizzes.** There are quizzes on Canvas that count as part of your participation score. Point values of Canvas quiz questions vary. Canvas quiz questions are either correct (full points) or wrong (zero points). **Each quiz gives you two attempts and the** <u>last</u> **attempt counts (**<u>not the highest</u>).

You take the Canvas quizzes using the "Quizzes" tab on Canvas. **Canvas quiz questions** <u>also</u> are posted in the Canvas "topic modules", so you can solve them <u>before</u> opening the Canvas quiz. I recommend this, because opening a Canvas quiz counts as an attempt. NOTE – You may work in groups on the Canvas quizzes (but you should make sure you understand every solution in order to learn from them).

Answers will be discussed in the problem-solving sessions, but will not be posted on Canvas.

**Participation score.** Your participation score will be calculated <u>separately for each segment</u>, as **'clicker points earned + InstaPoll points earned + Canvas quiz points earned**, **as a percentage of the number of possible points'** (it is a <u>percentage</u> score). For each segment, you can earn "makeup points" on WebAssign. "Makeup points" assignments on WebAssign are different from your WebAssign homework assignments. Your participation score is capped at 100% for each segment of the course. Your participation score <u>for the course</u> is the average of your segment participation scores (1/3 weight on each). **Makeup points.** For each segment of the course, you can "make up" twelve percent of that segment's participation points, subject to a 100% cap. For example, you can increase your segment participation score from 60% to 72% or from 90% to 100%. **This policy accommodates the normal needs of students sometimes to miss a lecture due to a minor illness, job interview, etc.** (If you need to be absent for more than an occasional lecture, due to a prolonged illness or other unusual circumstances, please see me.)

"Makeup points" are earned on WebAssign. The "makeup points" WebAssign assignments are clearly labeled (to distinguish them from WebAssign homework).

Any student can complete the "makeup points" WebAssign assignments to increase their participation score for that segment. Regardless of whether a student has missed participation points due to wrong answers on clicker questions or Canvas quizzes, or due to absences, the "makeup points" WebAssign assignments replace missed points (subject to the 100% cap for each segment's participation score).

#### **PROBLEM-SOLVING WITH PROF. BENCIVENGA**

Tuesdays from 4:55-5:45 pm, I will solve problems. Most Tuesdays, we'll stay in the lecture hall for this. Occasionally we may need to go to another room and I will announce this if and when it happens. I will solve problems to help you with upcoming Canvas quizzes; go over the answers to the Canvas quizzes (after the due date); and work through additional problems to help prepare you for the exams. The objective is to give you practice with the logic involved in figuring out how to approach a problem, how to set it up, and how to solve it. Your understanding of the concepts will be enhanced as you see them applied. **The problem-solving sessions are strongly recommended (but not required).** They will be available in Lectures Online.

#### **WEBASSIGN**

WebAssign is a web-based learning and homework lab. See "TEXTBOOK" above for your options for acquiring access to WebAssign. See the WebAssign module on the Canvas course web site for more information about how to register, how to purchase access if you do not purchase a "bundle", and the 14-day grace period.

When you register for WebAssign on the WebAssign web site, you'll be prompted for your UT EID. This is necessary for us to associate your WebAssign scores with your exam scores and participation points. WebAssign scores are combined with your exam scores and participation points using Excel at the end of the semester.

WebAssign is used for <u>both</u> homework <u>and</u> "makeup points". Most WebAssign assignments are homework. Most topics have more than one WebAssign homework assignment. <u>Also</u> most WebAssign homework assignments have multiple versions – (A) and (B), or (A), (B), and (C) – and the "better of" or "best of" your scores on these versions counts. You can work on more than one version with no risk to your WebAssign score.

"Makeup points" assignments are distinct (separate), and are clearly labeled as such. See above about "makeup points".

See the WebAssign module on the Canvas course web site for details about point value and number of attempts for each WebAssign question, tech support for WebAssign, etc.

Your WebAssign homework score for the semester will be 'number of points for correct answers, as a percentage of the number of possible points on WebAssign assignments for the semester'.

#### CANVAS

- Lecture slides
- Links to required videos
- Lectures Online
- Canvas quizzes
- Practice homework problems <u>with answers</u> (not for credit)
- Practice exams <u>with answers</u> (not for credit)

- Exams with answers (posted after you take your exams)
- Exam scores and other scores
- Tips for learning in this course
- Formula sheets and probability tables
- Information about WebAssign
- Announcements

### PRACTICE EXAMS AND PRACTICE HOMEWORK PROBLEMS

Practice exams with detailed answers are posted from the past five semesters. These are excellent study tools. You can use some for learning and others to check your proficiency and speed, which will give you confidence. Practice homework problems also are posted for each unit, with detailed answers. Old exams and the practice homework consist of instructive problems that will develop your understanding of how to apply the methods taught in this course, and how to solve complex problems more generally. **It is strongly recommended that you make practice problems a central part of your learning strategy.** 

See the Excel spreadsheet posted on Canvas for a suggested timetable for practice questions. Many specific problems are identified on the Excel spreadsheet. I've put these in little pdf's, with links on the web page of the relevant topic module on Canvas. Some of them solve in the problem-solving sessions, but there are many more that are for you to use when studying on your own or in a study group. Take advantage of these specific, targeted practice problems!

#### COMMUNICATION

You are responsible for all information given in lecture, including lecture content and announcements, and for all information posted on Canvas. You are responsible for all information in email exchanges directly between you and me, and between you and any of the TA's. Course emails may come from me or from any of the TA's. Check any email address that you have used to email me or the TA's, as well as the email address you have on file with UT (used by Canvas). Some information will be conveyed <u>only</u> in Canvas announcements. I recommend you set up Canvas so that announcements are emailed to you (in addition to remaining permanently on Canvas).

#### **OFFICE HOURS**

My office hours are on **T**, **Th 1:00 – 2:30**, in **BRB 3.102C**. TA office hours will be posted on Canvas.

### **TEACHING ASSISTANTS**

TA office numbers and office hours will be posted on Canvas once the TAs course schedules have been finalized.

Name	Office hours	Email address
Trenton Herriford (HEAD TA)	TBA	trenton.herriford@utexas.edu
Dongchen Zao	ТВА	dczhao@utexas.edu
Jialue Cao	ТВА	phatcao@utexas.edu
Maximilian Nohr	ТВА	mnohr@utexas.edu
Margarita Petrusevich	ТВА	<u>margarita petrusevich@utexas.edu</u>

#### SCHEDULE OF TOPICS, READING, GRADED WORK, AND EXAMS

1. TABLE: Below is a table listing the topics, which lecture(s) will be on each topic, titles of the lectures, file names of the lecture slides (pdf's), and the textbook reading for each topic. This table also is posted on Canvas.

2. CALENDAR IMAGES: Calendar images giving the topic of each lecture, dates of problem-solving sessions and review sessions, exam dates and times, Canvas quiz due dates, and required video due dates are posted on Canvas.

3. EXCEL SPREADSHEET: An Excel spreadsheet called is posted on Canvas for students. It has detailed <u>daily information</u> about the schedule of topics and readings, required videos to view (with due dates), Canvas quiz due dates, WebAssign due dates, problems that will be reviewed in the problem-solving sessions, and other specific practice problems students should study on their own (as well as what they should get out of these problems),etc.

## TABLE OF TOPICS, LECTURES, AND READING

Topics	Lectures	Lecture title (or video)	Lecture slides (file name)	Devore reading	Notes
1: Introduction	Lecture 1	Introduction and the Nature of Economic Data	01-1 intro LECTURE	1.1	
2: Descriptive	Lectures 2-3	Part 1, Lecture 1: Measures of Central Tendency	02-1 descriptive LECTURE 1	1.3	
Statistics		Part 1, Lecture 2: Measures of Dispersion			
		Part 1, Lecture 3: Linear Transformations	02-1 descriptive LECTURE 2	1.4	Skip boxplots
		Part 2: Covariance and Correlation	02-1 descriptive LECTURE 3		
			02-2a descriptive LECTURE		
3: Frequency	Lecture 4	Part 1: Frequency Distributions and Grouped Data	03a freq dist LECTURE	1.2	Skip stem and leaf plots
Distribution					and dot plots
4: Probability	Lectures 5-9	Part 1: Set Theory and the Axioms of Probability	04-1 prob	2.1, 2.2	
Theory		Part 2: Rules of Probability	04-2 prob	2.2, 2.3, 2.4, 2.5	
		Part 3, Lecture 1: Bayes Rule and Bivariate	04-3 prob LECTURE ONE		Bayes Rule is in 2.4
		Probability Distributions			
		Part 3, Lecture 2: Counting Rules	04-3 prob LECTURE TWO	2.3	
		MIDTERM #1			
5: Discrete	Lectures 10-13	Part 1: Random Variables and Mathematical	05-1 discrete rv 1	3.1, 3.2, 3.3.	For Part 2, absorb the
Random	(FALL)	Expectation			discussion about jointly
Variables	Lectures 11-14	Part 2: Joint Probability Distributions	05-2 discrete rv 2	5.1, 5.2	distributed discrete
	(SPRING)	Part 3, Lecture 1: Binomial Random Variable	05-3 discrete rv 3 LECTURE 1	3.4	random variables. <u>Re-</u>
			binomial		<u>read</u> the discussion
		Part 3, Lecture 2: Poisson Random Variable	05-3 discrete rv 3 LECTURE 2	3.6	about jointly-
			Poisson		distributed continuous
		Part 3, Lecture 3: Hypergeometric Random Variable	05-3 discrete rv 3 LECTURE 3	3.5	random variables along
			hypergeometric		with the Topic 6. Skip
		Review Questions: Binomial, Hypergeometric and	No posted file (InstaPoll		Ex 5.8.
		Poisson Distributions	questions)		
6: Continuous	Lectures 13-16	Part 1: Continuous Random Variables	06 continuous rv 1	4.1, 4.2	
Random	(FALL)	Part 2: Continuous Random Variables	06 continuous rv 2	4.3	Skip the binomial
Variables	Lectures 14-17				approximation to the
	(SPRING)				normal distribution
		Part 3: Continuous Random Variables: Normal Plot	06 continuous rv 3 NORMAL	4.6	Skip 4.4, 4.5
		[OPTIONAL]	PLOT [not on exam]		
7: Sampling	Lecture 17-20	Part 1: Sampling Theory	07 sampling 1 (BEFORE	5.3, 5.4, 5.5	
Theory	(FALL)		MT#2)		
	Lectures 18-19,	MIDTERM #2			
	21 (SPRING)	Part 2: Sampling Theory	07 sampling 1 (AFTER MT#2)		
		Review Questions: Sampling Theory	No posted file (InstaPoll		
			questions)		

8: Point and	Lectures 20-22	Part 1: Point and Interval Estimation	08-1 point & interval est	7.1, 7.2, 7.3	Skip prediction
Interval	(FALL)		LECTURE		intervals, tolerance
Estimation	Lectures 22-24				intervals
	(SPRING)	Part 2: Properties of Estimators	08-2 properties of estimators	6.1	Skip Ex 6.8, skip 6.2,
			LECTURE		skip the score CI for p
9: Hypothesis	Lectures 22-25	Part 1: Conceptual Framework for Hypothesis Tests	09-1 hyp testing intro	8.1	
Testing	(FALL)		LECTURE		
	Lectures 24-27	Part 2: Hypothesis Testing: Success Probability of a	09-2 Bernoulli pop LECTURE	8.4	
	(SPRING)	Bernoulli Population			
		Part 3: Hypothesis Testing: Population Mean	09-3 population mean	8.2, 8.3	
			LECTURE		
		Part 4: Hypothesis Testing: Normal Population,	09-4 normal pop, variance	8.5	
		Variance	LECTURE		
		Part 5: Rejection Regions, Confidence Intervals, and	09-5 p-values etc LECTURE		Skip simultaneous
		P-Values			testing, likelihood ratio
					principle
<b>10:</b> Two	Lectures 26-28	Part 1: Two Populations: Hypothesis Tests and	10-1 two pops, diff between	9.1, 9.2	Skip <u>to</u> pooled t
Populations:	(FALL)	Confidence Intervals	means LECTURE		procedures in 9.2
Hypothesis	Lectures 28-30	Part 2: Hypothesis Tests and Confidence Intervals:	10-2 two Bernoulli pops	9.4	
Tests and	(SPRING)	Two Bernoulli Populations, Large Samples	LECTURE		
Confidence		Part 3: Hypothesis Tests and Confidence Intervals:	10-3 two normal pops, diff	9.5	
Intervals		Variances of Two Normal Populations	between variances LECTURE		
		FINAL EXAM			

**QUANTITATIVE REASONING FLAG.** This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES.** A student with a disability may request academic accommodations from Services for Students with Disabilities (512-471-6259, <u>http://diversity.utexas.edu/disability/</u>). SSD accepts documentation of the disability, and provides the student with letters for their instructors stating the appropriate accommodations. SSD also provides guidelines for informing instructors about needed accommodations.

Let me know of any accommodation(s) you will need as early in the semester as possible, even if you don't have your accommodation letter yet. In order to receive an accommodation, I need either the SSD letter or knowledge that the letter is on its way <u>at least as far ahead</u> as specified by SSD guidelines for informing instructors. (If you receive an accommodation, I will need your SSD accommodation letter in order for your score to count toward your course grade.)

**RELIGIOUS HOLY DAYS.** By UT Austin policy, you must notify me of your pending absence <u>at least</u> fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, or an assignment, in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable amount of time after the absence.

**ACADEMIC INTEGRITY.** Each student in this course is expected to abide by the University of Texas Honor Code:

"The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community."

On all graded work in this course, you are expected to submit work that is your own. On homework and quizzes, you are welcome to discuss with others how to approach a problem, but the last step before you submit your answer should be that you solve the problem yourself. However, discussion in class about clicker questions is allowed and encouraged.

During exams, you must do your own work. Unless it is explicitly allowed, you may consult only the materials provided as part of the exam, and you may not look at notes, books, articles, etc., whether yours or anyone else's. No communication of any kind is permitted between students during exams (written, verbal, non-verbal, etc.). You may not look at another student's work, and you may not show another student your work. Any such behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

**USE OF EMAIL FOR OFFICIAL CORRESPONDENCE TO STUDENTS.** All students should become familiar with the University's official email student notification policy. It is the student's responsibility to keep the University informed of any changes in his or her email address. Students are expected to check email on a frequent and regular basis in order to stay current with University communications, recognizing that certain communications may be time-critical. This includes emails from instructors. It is recommended that email be checked daily.

**EMERGENCY EVACUATION**. From the Office of Campus Safety and Security (<u>512-471-5767</u>, <u>http://www.utexas.edu/safety/</u>):

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Behavior Concerns Advice Line (BCAL): <u>512-232-5050</u>
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: <u>utexas.edu/emergency</u>.

**BEHAVIOR CONCERNS ADVICE LINE (BCAL).** If you become worried about someone who is acting differently, you may call the Behavior Concerns Advice Line at 512-232-5050 to discuss your concerns about their behavior. This service is provided by the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and the University of Texas Police Department (UTPD). Visit <u>http://www.utexas.edu/safety/bcal</u> for more information.