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University of Texas at Austin  
Department of Economics  
Fall 2010

**Course Outline**  
**Economics 329: ECONOMIC STATISTICS (unique #33435)**

**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
- lay a foundation for econometrics

**Textbook and other required materials**

The required textbook is **Statistics for Business and Economics** by Newbold, Carlson, and Thorne (Prentice Hall, 7<sup>th</sup> edition, 2010). In addition, you'll need an access code for MyStatLab, a web-based homework lab for the textbook. Finally, you'll need an iClicker.

You have several options for acquiring the textbook and access to MyStatLab:

- New textbook packaged with an access code for MyStatLab (available at the bookstore, or at the publisher's web site: <http://www.pearsonhighered.com/student> )
- Used textbook, plus an access code for MyStatLab purchased separately at the publisher's web site (above) or <http://www.coursecompass.com/>
- Access code for MyStatLab includes access to the full eBook
- Access code for MyStatLab, plus the "print upgrade" (loose leaf printed copy of the book), purchased at a discounted price from within MyStatLab

The eBook and print upgrade are alternatives that are not as convenient as a textbook, but are less expensive. I would recommend against relying exclusively on the eBook. ***Exams are open-book, open-note exams, but computers are not allowed, and students may not share books or printed material during exams.***

The other supplies you'll need are 5" by 8" index cards (several dozen) and three blue exam books.

**Evaluation**

Most of your course grade will be based on two midterm exams (20% each), a final exam (30%), and MyStatLab homework (10%). The remaining 20% of your course grade will be based on "clicker questions" and "index card questions" (more below).

Your weighted course score will be computed from your scores on these components, and a grade will be assigned based on your score relative to the distribution of scores in the class. Pluses and minuses will be used.

**All exams are open book, open notes exams (computers are not allowed, and students may not share books or printed material during exams). The final exam is not cumulative. The midterm exams will be evening exams. The final exam will be in the university-assigned time slot during the final exam period.** The dates for the exams are as follows:

**Midterm #1: Wed. Sept. 29 from 7:15 to 9:15 pm, JGB 2.324**

**Midterm #2: Wed. Nov. 3 from 7:15 to 9:15 pm, WEL 2.224**

**Final exam: Sat. Dec. 11 from 2:00 to 5:00 pm, room TBA**

**Confirm the date/time when UT releases the official final exam schedule.**

Let me know if you have a conflict that prevents you from taking either or both of the midterms with the rest of the class. ***If you do not notify me of a conflict by Fri., Sept. 2, I will assume you are available for the exams.***

### **MyStatLab**

MyStatLab is a web-based homework lab. You'll need an access code (see above) and the course ID, which is **bencivenga64001**. With these, you register at <http://www.coursecompass.com/>. There will be approximately 10 homework assignments (approximately one for each chapter). I'll email you when each assignment is posted, telling you it's available and giving you the due date (you'll always have a week or more). You can return to an assignment and work on it up to the due date. Your MyStatLab homework score for the semester will be **'number of correct answers/number of problems.'** MyStatLab is a great resource!

### **"Clicker questions," "index card questions," and extra credit problems**

Most lectures, there will be several "clicker questions" projected during lecture. Students' responses will be stored in a data base. Details about how to register your clicker will follow. Some clicker questions will be intuition-building questions. Others will test whether you can apply key ideas. You'll accumulate points over the semester. ***We'll drop three class days for each student*** (there may be a few class days with no "for credit" clicker questions, which don't count toward the three). Your semester score for clicker questions will be **'correct answers/number of questions' + 'questions attempted/number of questions'** for the class days that count for you. This scheme rewards participation as well as correct answers. Unless otherwise specified, each clicker question is worth 1 point.

Questions that require calculations and a numerical answer, or a longer explanation, will be given to you as "index card questions." ***Please bring a handful of 5" by 8" index cards to each lecture.*** On some occasions, student answers to an index card question will be collected a few minutes after the question is projected. On other occasions, answers will be collected at the start of the next class. Unless otherwise specified, each index card question is worth 2 points, and these questions will be scored similarly to clicker questions.

Over the semester, there will be a small number of extra credit problems, worth variable numbers of points. These are interesting problems I'm providing as an added challenge, to broaden your exposure to statistics. Feel free to attempt as many or few of these as you like. They won't appear on exams, but they will teach you additional statistical methods and applications that you may find to be useful in other courses or in your future career.

Typically, answers to clicker questions will be projected immediately. Because of variation in timing of index card questions and extra credit problems, there is no single method for making answers available—so be alert for information about these answers.

## **Blackboard**

All documents and lectures will be posted on Blackboard. As items are posted throughout the semester, we'll email you to let you know something's been added. On Blackboard, you'll find:

- Lecture slides (a **shortened version** of each set of lecture slides, typically posted ahead, and the **long version**, posted a day or so after the lecture)
- "Captured lecture" (provided and posted by UT's division of technology innovation in instruction)
- Some "index card questions" (if not included in the lecture slides)
- Extra credit problems
- Practice problems with answers
- Practice exams with answers
- Exams with answers

The shortened version of the lecture slides collapses multiple slides into one, where possible, and removes answers to in-class problems. **I recommend you print the shortened version of the slides and bring it to lecture, as a base for taking notes.** These are pdf files. You can save paper by printing them 2-on-1 or 4-on-1. **The exams are open-book, open-notes exams, but computers are not allowed, and students may not share books or printed material during exams; keep this in mind when devising your note-taking system.**

The lecture room has "lecture capture." I've arranged for the captured lectures to be posted on Blackboard (a "video" of the projected slides, with my voice). **Note these videos require Adobe Flashplayer for viewing.**

## **Communication**

You are responsible for all information provided during lecture, including (but not limited to) lecture content, and clicker questions, index card questions, and extra credit problems, as well as announcements about lectures and lecture notes, MyStatLab homework, review sessions, and everything involving logistics. **We will make every effort to summarize and repeat announcements in emails.** However, if information is conveyed in lecture, we will regard this information as having been given to the class.

In addition, you are responsible for information conveyed in emails—so please make sure your email address on Blackboard is correct, and check your email daily. **Official emails may come from me or from Melinda Petre, the head TA (see below).** Occasionally, one of the other TA's will send an official email.

## **Practice homework problems, and practice exams**

I'll post a set of practice homework problems for each chapter. **Detailed answers also will be posted.** The practice homework contains more complex problems than those in MyStatLab. They are not necessarily more difficult (although some are), but typically they involve more elements. In addition, the practice homework contains problems on material I add to the textbook, problems based on newspaper articles, problems based on "real world examples," etc.

These are interesting problems, that build your understanding, and that are relevant to how statistical methods are used. I've written these problems as a guide through all of the concepts and methods we cover in this course. They are longer than problems on the exams, but similar to exam problems in style and emphasis. **It is strongly recommended that you make the practice homework problems a central part of your study plan.** Many students form study groups to work through and discuss these problems.

**TA review sessions**

The TA's will hold optional review sessions on a regular basis, in which they'll go through selected problems from the practice homework and practice exams. Dates/times/locations will be announced.

Many students like to learn verbally and visually, in an interactive setting. The review sessions provide this environment, and many student report they are very helpful. However, note that all of the problems and answers the TA's will cover will be on Blackboard, so even if you can't attend review sessions, you'll still have access to all of the material. We'll try to schedule a variety of days of the week and times, to maximize the chance all students will be able to attend at least some reviews.

**Office hours/reviews**

My office hours will be **T, Th from 10:30-11:00 in BRB 3.102C.**

Your TA's are:

- **Melinda Petre (head TA)**      [melinda.petre@mail.utexas.edu](mailto:melinda.petre@mail.utexas.edu)  
**BRB 2.154**  
**Th 12:30-3:30**
- **Piin-hueih Chiang**      [Phchiang@mail.utexas.edu](mailto:Phchiang@mail.utexas.edu)  
**BRB 2.124**  
**M 3:30-5, T 2-3:30**
- **Swagata Bhattacharjee**      [swagata.bhattacharjee@gmail.com](mailto:swagata.bhattacharjee@gmail.com)  
**BRB 4.128**  
**T 12:15-3:15**
- **Qianfeng Tang**      [tangqianfeng198@gmail.com](mailto:tangqianfeng198@gmail.com)  
**BRB 3.146**  
**W 12-3**

TA office numbers and office hours will be emailed to you, placed in a permanent announcement on Blackboard, and included in an updated and re-posted course outline.

**Prerequisites**

The prerequisites for this course are grades of at least C- in ECO 304K /L, and MATH 408C/D or MATH 408K/L (or the equivalent), with grades of at least C-.

**Accommodations**

Students with disabilities may seek appropriate academic accommodations from Services for Students with Disabilities.

**Schedule of topics and reading (tentative)**

Weeks 1-2	<b>Introduction to economic data and sampling</b>	Ch 1.2	Aug. 26, 31
Weeks 2-3	<b>Descriptive statistics</b> <b>Introduction to regression</b>	Ch 2 Ch 11.1-11.3	Sept. 2, 7
Week 3	<b>Frequency distributions</b>	Ch 1.3-1.7	Sept. 9
Weeks 4-5	<b>Probability</b>	Ch 3	Sept. 14-23

**Midterm #1 7-9 pm Sept. 29**

Weeks 6-7	<b>Discrete random variables</b> <b>Joint probability distributions</b>	Ch 4	Sept. 28-Oct. 7
Weeks 8-9	<b>Continuous random variables</b>	Ch 5	Oct. 12-19
Weeks 9-10	<b>Sampling theory</b>	Ch 6	Oct. 21-26

**Midterm #2 7-9 pm Nov. 3**

Weeks 10-11	<b>Point and interval estimation</b>	Ch 7, 8	Oct. 28-Nov. 4
Weeks 12-13	<b>Hypothesis tests based on a single sample</b>	Ch 9	Nov. 8-18
Weeks 14-15	<b>Hypothesis tests based on two samples</b>	Ch 10	Nov. 23-Dec. 2

**Final exam Sat. Dec. 11 from 2:00 to 5:00 pm (confirm data/time)****Lecture capture (statement from UT)**

This class is taking part in a lecture capturing experiment. As part of this experiment, audio and projected material presented in class will be recorded and made available to you for review via Blackboard. Links for the recordings will appear in the 'Course Documents' section on the Blackboard page for this class.

To watch a recording, simply click on the link for the recording, enter your UTEID information and select the version of the recording you want to watch (use High Speed if you have a fast internet connection and Low Speed if you have a slower connection). You will need Flash installed on your computer to view these recordings (<http://get.adobe.com/flashplayer/>).

Please remember that this is a trial of the lecture capturing system, so an issue might arise that could prevent material from being made available in a timely fashion or at all. Although every effort will be taken to keep the system running, UT does not guarantee the availability of these recordings. Attending class is the only way to ensure your viewing of the professor's presentation.

You can find additional information about the lecture capture system as well as report technical issues at: <http://www.utexas.edu/cola/information-technology/faqs/echo360-faq.php>

**Registration for MyStatLab**

Please see the posted document on Blackboard for how to use your access code.