

STA 371G
Statistics and Modeling
Unique Numbers 04207, 04208

PROFESSOR

Betsy Greenberg

Hours: Monday 10:30 -11:30 am, Tuesday 11:30 am -1:30 pm or by appointment

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TEACHING ASSISTANT

Kathy Ho

Hours: Tuesday and Thursday, 2:30 - 4:00 pm

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TEXTBOOK

Data Analysis and Decision Making, 3rd Edition, Revised by Albright, Winston, and Zappe, 2008. The CD is not necessary. If you prefer, digital copies are available at cengagebrain.com.

GRADING

Tests	60%
Homework	20%
Projects	10%
Participation	10%

COURSE DESCRIPTION

Business decisions are made under uncertainty. This course provides tools for dealing with uncertainty. Upon completion of the course you should be able to apply decision analysis techniques, use regression analysis, and simulation modeling. This course is designed to present applications for these techniques and to deal with topics that prove most helpful to those involved in business.

PREREQUISITES:

The following prerequisites are enforced for this class: Management Information Systems 301 or 310; Mathematics 408D, 408L, or 408M; Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H. I am not able to make exceptions to prerequisites. Students are expected to be familiar with Excel and elementary statistics.

ASSIGNMENTS:

I will assign weekly homework assignments. These will be posted on the course website and are **due on Tuesdays by midnight**. The homework assignments are designed to keep you current in the course. The assignments are available online on the course web page. It is recommended that students work on assignments independently.

You may open an assignment (and even print it out) several times before submitting your answers. Click on the Submit button (at the bottom) when you are done.

Assignments must be completed by midnight on their due dates. It is recommended that you do not wait until the last minute to complete assignments. This will allow for any unexpected difficulties (with the material, website, etc.).

Once the deadline has past, you will be able to see how you did on an assignment. Click on Tools and then Grades and then the automatically generated grade for the assignment to see the correct answers. *Ignore these HW grades.* Your TA will assign grades after each assignment is due.

Two longer projects will be assigned for this class. One will involve decision making under uncertainty and the other will involve regression modeling.

CLASS PARTICIPATION

We will be using the MOCA (Mobile Ongoing Course Assessment) system for class participation. You are required to bring a mobile device (any device with a web browser such as a Smartphone, laptop, or iPod Touch) and to bring it to class every day. Your class participation grade will be determined from the responses that you provide in class. The MOCA system is available at <https://diia.webhost.utexas.edu/oca/moca/index.cfm>. You will need to enter your UTEID and password to use the system.

COMPUTING

This course will provide you with skills to analyze business problems with tools you will have access to and will use during your career. We will use Microsoft Excel in addition to Decision Tools Suite (Stat Tools, Precision Tree, and @Risk) for increased capability. If you bought a new copy of the textbook, the CD includes this software. If not, you can download it from the McCombs website at <http://www.mcombs.utexas.edu/services/cbacc/coe/>. You will need your UTEID and password to download the software.

The Decision Tools Suite runs only on Windows machines. If you use a Macintosh computer, you must use a Windows emulator such as Parallels. Alternatively, you can use the computers in the MOD Lab or Millennium Lab. Some class meetings will be held in the MOD Lab to help you become familiar with the software.

TESTS

Tests for this class will be given in the Mod Lab on Thursday evenings, February 17, March 31, and May 5. You will access the test through Blackboard and have Excel and Decision Tools available. You may bring a calculator to the tests. You may bring one 8.5" by 11" page (both sides) of notes to the first and second test. You can bring 2 pages to the third test. You must bring a picture ID to each test. The third test will be cumulative.

There will be no make-up tests. Your third test grade can replace one lower test grade. You must inform the professor in advance if you are going to miss a test due to observance of a religious holiday or an official university activity.

WEB PAGE <http://courses.utexas.edu>

This course will use a password-protected class web site. Syllabi, notes, assignments, and other resources will be available within this site. Site activities will include submission of assignments and posting of grades. Students who do not want their names included in the electronic class roster must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see: <http://www.utexas.edu/student/registrar/catalogs/gi00-01/app/appc09.html>. Students who have restricted their directory information must see the professor to identify him or herself.

SCHOLASTIC DISHONESTY

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business:

By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at <http://deanofstudents.utexas.edu/sjs/> or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

STUDENTS WITH DISABILITIES

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. This includes students with learning disabilities. For more information, contact the [Office of the Dean of Students](#) at 471-6259, 471-4641 TTY.

TENTATIVE COURSE SCHEDULE

Dates	Topic	Reading	Assignment
Jan 19	Introduction		Survey Jan 20
Jan 21 Jan 24	Probability Review	5.1–5.3 6.1–6.5	HW 1 Jan 25
Jan 26 Jan 28 Jan 31	Decision Trees	7.1–7.3	HW 2 Feb 1
Feb 2 Feb 4 Feb 7	Value of Information	7.4, 7.5	HW 3 Feb 8
Feb 9 Feb 11 Feb 14	Review of Inference	Ch 9, 10	HW 4 Feb 15
Feb 16 Feb 17	Review and Test 1		Project 1 Feb 22
Feb 21 Feb 23 Feb 25	Linear and Curved Patterns	11.1–11.4, 11.6.3	HW 5 Mar 1
Feb 28 Mar 2 Mar 4	Inference for Regression	12.1–12.3, 12.10	HW 6 Mar 8
Mar 7 Mar 9 Mar 11	Assessing Assumptions	12.8-12.9	HW 7 Mar 22
Mar 21 Mar 23 Mar 25 Mar 28	Multiple Regression	11.5, 11.6.1-2	HW 8 Mar 29
Mar 30 Mar 31	Review and Test 2		Project 2 April 5
April 4 April 6 April 8 April 11	Building Regression Models	12.4–12.7	HW 9 April 12
April 13 April 15 April 18	Time Series	13.1–13.4, 13.9	HW 10 April 19
April 20 April 22 April 25	Introduction to Simulation	5.4, Ch 16	HW 11 April 26
April 27 April 29 May 2	Simulation Models	Ch 17	
May 4 May 5	Review and Test 3		