

DS 212-04, MW, 5:00 pm – 6:15 pm, BUS 217
Professor Vijay Mehrotra, Fall 2004

Course Objectives

For you to be an effective businessperson and citizen in today’s world, it is more important than ever to have an understanding of data, statistics, and analysis.

My goal in this course is to enable you to become informed “consumers” of statistical arguments, models, and analysis. To accomplish these goals, we will work together to develop your reasoning skills and your understanding of statistical methods, both of which will help you deal with the increasingly uncertain business world that we live in.

In particular, by the end of this course, you should be able to:

1. Understand what data is and why it is important for businesspeople
2. Describe data numerically & graphically
3. Assess the relationships between two different data elements using graphical techniques and regression analysis
4. Understand basic probability theory and distributions
5. Understand what sampling is and how to make use of sample data
6. Estimate statistical parameters and design/conduct tests of their quality

In addition to enabling you to see the world more analytically, the class is also intended to prepare you to be successful in future business courses across all business disciplines.

Throughout the course, we will use examples from the business world to illustrate the concepts that we are working with, including “real-world” situations from finance, marketing, operations, customer service, politics, and public policy.

<p>Professor Office Office Hours</p> <p>Phone Email Home Page</p>	<p>Vijay Mehrotra SCI 349 M 2:45 pm – 4:45 pm W 2:45 pm – 4:45pm Other times by individual arrangement</p> <p>Tel: (415) 338-2743 drvijay@sfsu.edu online.sfsu.edu/~drvijay [UNDER CONSTRUCTION]</p>
<p>Required Materials</p>	<ul style="list-style-type: none"> • <i>Stats: Data and Models</i>, by Richard D. DeVeaux, Paul F. Velleman, and David E. Bock, Pearson/Addison Wesley, © 2005. • 2-variable calculator (look for “a, b, r” keys). See recommended list • PC with <i>Excel 97</i> or <i>2000</i>, including Data Analysis Toolpak add-in (NOTE: PCs with Excel are also available in COB Computer Labs)

Prerequisites	Within 1 week of the start of classes, you must provide proof of having earned a C- or better in a calculus course (BA 110 , MATH 110/220, or equivalent).
Policies	<p>All exams will be open book and open notes, with calculators (but not computers) permitted. I strongly urge you to get a calculator and to learn to use it.</p> <p>I expect you to do your own work in all cases. I will not negotiate with cheaters – all infractions will be dealt with swiftly and harshly.</p> <p><i>Make-up exams are given only under very extraordinary circumstances (VEC).</i></p> <p>If you as a student encounter VEC, communicate immediately with the instructor. If I determine that this in fact is a case of VEC, I will work with you – but expect a minimum penalty of 20% of the value of the exam. This is the only fair solution that I have been able to devise.</p> <p>Missed exams, quizzes, and assignments will count as a 0.</p>
Enrollment Policy	<p>Class size will not exceed the official class size limit for any reason. <u>Students from the waiting list who are allowed into this class must enroll in classes by the fourth week of the semester. Students will not be permitted to add later even if they have attended all classes, taken all exams, and completed all requirements.</u> University policy is that withdrawals are permitted only for serious and compelling reasons.</p> <p>IMPORTANT NOTE: College of Business policy prohibits students from withdrawing from BUS 212 or any other course more than once for any reason.</p>
<p>Advice</p> <p>Announcements</p> <p>Blackboard</p>	<p>The two most critical pieces of advice that I can give you for this course are:</p> <ul style="list-style-type: none"> • Come to class • Read the book and work on the problems <p>This class is a collaborative experience that you and I are sharing. I expect you to come to class each day, and in class I will often make announcements and suggestions, including guidance on which parts of the text to focus on. <u>You are responsible for knowing what was said in class.</u></p> <p>However, I appreciate that many of you are busy and may occasionally miss class during the entire semester. Therefore, I will do my best to provide information via Blackboard and email as well.</p> <p><u>You are responsible for (a) getting up and running on Blackboard and (b) making sure that the email address that is in Blackboard is the right one for you.</u></p>

Homework	<p>Homework assignments will be given each week via Blackboard, including problems from the textbook as well as supplemental problems.</p> <p>Solutions to problems will be provided via Blackboard. Solutions to supplemental exercises will be provided either through Blackboard or in class.</p> <p>Although I will <i>not</i> collect these problems, I strongly urge you to work on them (either individually or with a friend) because <i>this is the only effective way to master the material & prepare for the exams.</i></p> <p>We'll only have time to discuss a small fraction of these problems in class, so please visit me if you have questions or need help.</p>
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Exam Dates	<p>Please take note of the following dates:</p> <ul style="list-style-type: none"> • Midterm Exam #1: Wednesday, October 6 • Midterm Exam #2: Monday, November 15 • Final Exam: Wednesday, December 15, 1:30 – 4:00 pm:
Quizzes	<p>To succeed in this course, it is important that you stay current with the course material. One technique that I use to “encourage” you to stay up to date is to give two Quizzes over the course of the semester.</p> <p>Quizzes will not be announced and may be given at any time. These may be in-class quizzes at the beginning or end of a class session, or take-home assignments that are graded and treated as a “quiz” in terms of the course grade (see below).</p>
Excel Assignments	<p>Two Excel projects will be assigned, collected, graded, with solutions provided. Due Dates for these Excel projects are:</p> <ul style="list-style-type: none"> • Excel Project #1: Wednesday, September 29 • Excel Project #2: Wednesday, December 1 <p>These projects are intended to help you connect the statistical ideas and techniques that we learn in class to spreadsheets that you will likely use throughout your years in school and in your professional careers.</p> <p>Assignment details will be provided 1-2 weeks before the Due Date for each project.</p>
(Optional) Research Paper	<p>You may elect to do a Research Paper on the application of statistics to problems in business and public policy. A more detailed description of the assignment will be provided to interested students approximately 4-6 weeks prior to its Due Date.</p> <p>Due Date:</p> <ul style="list-style-type: none"> • Research Paper: Wednesday, December 8

Course Grades	Final course grades will be based on either (A), (B), (C), or (D) below.	
	Case A = 500 Points	
	1. 2 Midterm Exams (100 points each):	200 points
	2. 2 Excel Assignment (50 points each):	100 points
	3. 1 Final Exam	200 points
	Case B = 550 Points	
	1. 2 Midterm Exams (100 points each):	200 points
	2. 2 Excel Assignment (50 points each):	100 points
	3. 2 Quizzes	50 points
	4. 1 Final Exam	200 points
Case C = 600 Points		
1. 2 Midterm Exams (100 points each):	200 points	
2. 2 Excel Assignment (50 points each):	100 points	
3. 1 Research Paper	100 points	
4. 1 Final Exam	200 points	
Case D = 650 Points		
1. 2 Midterm Exams (100 points each):	200 points	
2. 2 Excel Assignment (50 points each):	100 points	
3. 1 Research Paper	100 points	
4. 1 Final Exam	200 points	
5. 2 Quizzes	50 points	
Your grade will be based on overall percentage score for (A), (B), (C), or (D) whichever is higher. <i>Therefore, your performance on the quizzes and on the Optional Research Paper can only improve your overall grade.</i>		

Course Outline

Date	Course Section / Book Chapters	Textbook Problems
8/25	Course Introduction Exploring and Understanding Data DVB, Chapters 2	Ch 2: 9, 15, 19
8/30	Exploring and Understanding Data DVB, Chapters 3	Ch 3: 6,8,11,13,16, 19, 21
9/1	Exploring and Understanding Data DVB, Chapters 4	Ch 4: 1,5,9,13,19, 25,33
9/6	NO CLASS LABOR DAY	
9/8	Exploring and Understanding Data DVB, Chapters 5	Ch 5: 3,5,7,9,17,23
9/13	Exploring and Understanding Data DVB, Chapters 6	Ch 6: 8, 11, 13, 21, 25, 27, 29
9/15	Exploring and Understanding Data Complete Chapters 1-6 + Review Excel Assignment #1 Distributed	Section 1 Review Exercises 5, 22, 23, 25,31,37
9/20	Relationships Between Variables DVB, Chapter 7	Ch 7: 3, 9,10,15,17, 18,21
9/22	Relationships Between Variables DVB, Chapter 8	Ch 8: 8, 10, 21, 23, 25, 27, 33
9/27	Relationships Between Variables DVB, Chapter 8-9	Ch 9: 9,15,17,20,21
9/29	Relationships Between Variables DVB, Chapter 9	EXCEL ASSIGNMENT #1 DUE
10/4	Relationships Between Variables Complete Chapters 7-9 + Review	Section II Review Exercises 5,8,9,13,29,33
10/6	Midterm #1	

10/11	Understanding Randomness DVB, Chapter 11	Ch 11: 9,11,13,17,19
10/13	Sample Surveys / Experiments DVB, Chapter 12-13	TBD
10/18	NO CLASS	
10/20	Randomness and Probability DVB, Chapter 14-15	TBD
10/25	Randomness and Probability DVB, Chapter 14-15	TBD
10/27	Randomness and Probability DVB, Chapter 15-16	TBD
11/1	Randomness and Probability DVB, Chapter 16-17	TBD
11/3	Randomness and Probability DVB, Chapter 16-17	TBD
11/8	Randomness and Probability Complete Chapters 14-17 + Review Excel Assignment #2 Distributed	TBD
11/10	Midterm #2	
11/15	From the Data at Hand to the World at Large DVB, Chapter 18	TBD
11/17	From the Data at Hand to the World at Large DVB, Chapter 19	TBD
11/22	From the Data at Hand to the World at Large DVB, Chapter 20	TBD
11/24	NO CLASS Happy Thanksgiving!	

11/29	From the Data at Hand to the World at Large DVB, Chapter 20-21	
12/1	From the Data at Hand to the World at Large DVB, Chapter 21-22	EXCEL ASSIGNMENT #2 DUE
12/6	Learning About the World DVB, Chapter 23	TBD
12/8	Learning About the World DVB, Chapter 24	TBD
12/9 – 12/14	Special Office Hours TBA	
12/15	Final Exam	

