

MBA200S: Data and Decisions

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AXE:	Bahadir Bolukbasi	F308/MBA Lounge	boluk@haas.berkeley.edu
BLUE:	Adam Yonce	F689	yonce@haas.berkeley.edu
GOLD:	Adam Yonce	F689	yonce@haas.berkeley.edu
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GSI Office hours:

Bahadir Bolukbasi: Thursday, 12:30-2:00 PM, and by appointment
Adam Yonce: Friday, 2:30 – 4:00 PM, and by appointment

CLASS SCHEDULE:

COHORT	LECTURES	ROOM	DISCUSSION	ROOM
BLUE	M*,W 10:30 – 12:30	C135 Cheit	Friday, 11 AM -12:30 PM	C125 Cheit
GOLD	M*,W 2:00 – 4:00	C135 Cheit	Friday, 12:30 – 2 PM	C125 Cheit
OSKI	Tu, Th 10:30 – 12:30	C210 Cheit	Friday, 8 – 9:30 AM	F320 Haas
AXE	Tu, Th 2:00 – 4:00	C210 Cheit	Friday, 9:30 – 11 AM	F320 Haas

***Special Friday make-up LECTURE** (Labor Day holiday is Monday, September 5):

BLUE: Friday, **September 2**, 8:00 – 10:00 AM, Room C220

GOLD: Friday, **September 2**, 12:00 – 2:00 PM, Room C125

MBA200s discussion sections will *not* be held on Friday, 9/2. They begin 9/9.

Course Text: The Practice of Business Statistics: Using Data for Decisions
D .S. Moore, G. P. McCabe, W. M. Duckworth, S. L. Sclove,
(W. H. Freeman & Co. Publishers, 2003) ISBN 0-7167-9773-9.

Software: Microsoft EXCEL (Office 97 or higher), *or*
Stata (Intercooled Version 8.0, with perpetual license is recommended)
Student discounts available for Stata through their Grad Plan.
Call 1-800-782-8272 or visit <http://www.stata.com/order/new/edu/>

Reference Texts: Modern Business Statistics with Microsoft Excel,
D. R. Anderson, D. J. Sweeney, and T.A. Williams
(South-Western Publishers, Second Edition, 2004).
Statistics with Stata [Intercooled Version 8.0 with perpetual license]
L.C.Hamilton (Thompson Publishers, 2004)
Say it With Charts: The Executive's Guide to Visual Communication,
G. Zelazney (McGraw-Hill, Fourth Edition, 2001)
Introductory Statistics for Business Economics,
T. Wonnacott and R. Wonnacott (John Wiley & Sons, 1990)
Statistics for Management and Economics,
W. Mendenhall, J.E. Reinmuth, R. Beaver, D. Duhan
(Duxbury Press, 1996)
Business Forecasting, J.E. Hanke, A.G. Reitsch (Allyn and Bacon, 1995)

Course Content: MBA200s is an introductory course in data analysis and the application of statistical techniques to management problems. The objective is to enable students to become critical consumers of statistical analyses. Topics include sampling, confidence intervals, hypothesis testing, and regression analysis. We will focus on uncovering central tendencies and patterns in data with regard to making business decisions as well as common pitfalls and abuses in their interpretation. In addition to a basic statistics background, students should have a working knowledge of Microsoft Excel and or Stata. These software programs are useful at the beginning of the course for developing descriptive statistics, and are essential during the second half of the course for the statistical modeling. Although Excel does not offer a statistical package as complete as Stata, EXCEL will be adequate for the needs of MBA200S. One purpose of the discussion sections will be to go over specific example applications. Finally, note that MBA200S is an intensive condensed half-semester course that will require due diligence to keep pace with the material – don't fall behind!

Grading:

Team homework assignments	20%
Midterm (Friday, September 23)	25%
Team Project	10%
Final Examination (Monday, October 17)	45%

Performance in class will serve as a tiebreaker

Each team homework assignment will earn a maximum of 20 points. Graded homework sets will usually be returned at the discussion section meeting. Along with other course materials from lecture, each problem set assignment will be posted on Study.Net (available from Catalyst). You will find the data files for your problem sets (in Excel and in Stata formats) at http://faculty.haas.berkeley.edu/amas/MBA200S_05.

For your reference:

<u>Points</u>	<u>Problem Set</u>	<u>Due Date</u>
20	1: Chapters 1,2 + Instructor Problems;	9/12,13
20	2: Chapters 3,4 + Instructor Problems;	9/19,20
20	3: Chapters 6 + Instructor Problems;	9/28,29
20	4: Chapters 7,8 + Instructor Problems;	10/5,6
<u>20</u>	5: Chapters 10,11 + Instructor Problems;	10/10,11

100 total points

Note that assigned problems may refer back to earlier material in addition to the current chapter.

Student Teams:

Student Teams consist of the assigned teams by the MBA Program. The purpose of the team is to form a study group for homework discussion. *Each* team member is expected to work independently on every assignment and contribute equally to the team's overall performance. Homework is submitted by the team (not the individual) and should be submitted as a (single) **Excel/Stata/word-processed write-up** when possible – neatly handwritten portions are permissible. The front page of the assignment should contain, in the upper right corner, a **list of the team members** [by Last Name, First Name] who contributed to the assignment, the **cohort name** [AXE, BLUE, GOLD, OSKI], the course **MBA200s**, the **assignment number** (#1, 2, ...), and **due date** (as listed on the course syllabus or amended in class lecture). Each group member is expected to contribute fully to the group effort, division of labor is not advisable since it detracts from the overall learning process. Any habitual "absentees" should be reported to the instructor. In the event a team requests a re-grade of an assignment, the petition should be clearly (well-reasoned) documented, word-processed, and given to the GSI within one week of the return of the graded assignment. Re-grading will review the entire assignment with particular attention to the issues identified by the student team; hence, it is possible that the revised grade may be lower than the original score.

If you hand in an Excel Spreadsheet, you should attach a copy of that spreadsheet with the formulae cells displayed (hit 'Ctrl' and '~' to display) together with your spreadsheet results. For those working with Stata please include the commands you used or a log file.

Late homework will be penalized 2 points per day and not accepted after the following school day it is due. You may submit late homework to your GSI's mailbox, **with date submitted**, in the MBA lounge.

Example of the top of the first page of a homework set turned in late would be:

TEAM: Arnold, Sam
Felicia, Teresa
Lee, Jane
Stevens, Phil
Yberra, Andre
AXE COHORT
MBA200S
Assignment #1
Due: September 12/13
Submitted Late: 9/14/05

Ch.1:
(16)

9/16 [Disc.]	Review of Random Variables (\bar{X} as a random variable) Central Limit Theorem Examples of Sampling for Confidence Intervals Examples of Hypothesis Testing (for the Mean)	
9/19, 9/20	Hypothesis Testing of the Population Mean (cont'd) Sample Size Determination Power of the Test Testing One vs. Testing Two Population Means	Read: Ch. 6, pp. 409 – 429, Ch. 7.2: pp. 461-71 <i>HOMEWORK SET #2 IS DUE AT BEGINNING OF LECTURE</i>
9/21, 9/22	Inference for a Single Proportion Confidence Intervals for a Population Proportion, Sample Size and the Margin of Error, Hypothesis Testing: One-Sided and Two-Sided Tests	Read: Ch. 8.1: pp. 504-20
9/23 MIDTERM EXAM	Midterm Exam: Covering Chapters 1 – 5, and 6.1 in the text You should bring a pencil, eraser, and calculator. <i>Closed book and closed notes.</i>	9:00 – 11:00 AM MIDTERM ANDERSEN AUDITORIUM <All four cohorts at this time>
9/26, 9/27	Inference – Comparing Two Proportions Hypothesis Testing: One-Sided and Two-Sided Tests Testing One vs. Testing Two Population Proportions	Read: Ch. 8.2: pp. 520-44 “Vioxx Warnings” (Study.Net) Homework Set #4 Assigned Due in Lecture 10/5, 10/6
9/28, 9/29	Inference for Regression Basic Assumptions of Simple Linear Regression Review of Estimating the Parameters Review of s , R-Square, Adjusted R-Square, R , t_i and the ANOVA Table	Read: Ch. 10, pp.582 – 595 <i>HOMEWORK SET #3 IS DUE AT BEGINNING OF LECTURE</i>
9/30 [Disc.]	Review of Confidence Intervals and Hypothesis Testing for the Population Mean, for the Population Proportion	
10/3, 10/4	Inference for Regression Tests of Significance Estimation and Prediction – Confidence Intervals Non-Linear Regression	Read: Ch. 10, pp. 608 – 631 Homework Set #5 Assigned Due in Lecture 10/10, 10/11
10/5, 10/6	Multiple Regression Assumptions of a Multiple Linear Regression Model R-Square, Adjusted R-Square, R , F , t -statistics Residual Plot, Multicollinearity	Read: Ch. 11, pp. 632 – 650, “Colonial Case” <i>HOMEWORK SET #4 IS DUE AT BEGINNING OF LECTURE</i>
10/7 [Disc.]	Review Simple Linear Regression Concepts Assumptions, Tests of Significance, Estimation and Prediction	
10/10, 10/11	Multiple Regression (cont'd) Variable Selection and Model Building Non-linear Terms and Interaction Variables	Read: Ch. 11, pp. 650 – 695 <i>HOMEWORK SET #5 IS DUE AT BEGINNING OF LECTURE</i>
10/12, 10/13	Review and Extensions	Prepare for Final Exam
10/14[Disc.]	Multiple Regression – concepts and issues Prepare for the Final Exam	<i>DATA PROJECT IS DUE AT DISCUSSION OR BY 5:00 PM IN BOX OUTSIDE OF INSTRUCTOR’S OFFICE</i>
10/17 FINAL EXAM	FINAL EXAMINATION Comprehensive. Bring an 8 ½ x 11” sheet (2-sided) of notes (your choice), pencil, eraser, and calculator	ANDERSEN AUDITORIUM 6:00 – 8:00 PM (beginning <i>on the hour</i>)