

PEPPERDINE UNIVERSITY
THE GEORGE L. GRAZIADIO
SCHOOL OF BUSINESS AND MANAGEMENT

Professor: Joe Hahn

MBAM/MSG B/MSAF

593.12

Applied Data Analysis

Fall Trimester – Session A, 2008

Tuesday

1:00-5:00 PM

Malibu Campus

SYLLABUS

Applied Data Analysis
MBAM-593
Fall 2008

Day and Class times: Tuesday, 1:00-5:00 PM

Location: Malibu Campus

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Introduction

The significant advances in computing and communication technologies over the past two decades have resulted in a business environment today that increasingly requires highly numerate managers who are familiar with the principles of data analysis and who are able to use information effectively. Managers with these capabilities will be able to 1) consider richer sets of alternatives, 2) more deeply understand and question assumptions, and 3) consider more diverse measures of performance.

Course Description

The course is designed to prepare students to succeed in this environment by providing a foundation in underlying theory, illustrating analytical methods via classroom examples, providing instruction on relevant software tools, and presenting opportunities to independently apply techniques learned to homework problems and cases. Examples and cases will deal with real world business problems, including those with qualitative and categorical data representing social, environmental and ethical measures. The teaching approach will include lectures along with tutorials and demonstrations in class with software add-ins for *Microsoft Excel*.

Course Objectives

1. To introduce several commonly-used data analysis techniques and their applications. In particular, we will cover confidence intervals, hypothesis testing, correlation and regression, time series analysis and forecasting.
2. To develop analytical problem solving skills using these techniques.
3. To develop facility with the use of spreadsheet-based software to implement problem-solving skills.

Texts and Course Materials

Albright, S. C., Winston, W.L., and Zappe, C., 2006, *Data Analysis and Decision Making with Microsoft Excel, 3rd Ed* (required text), Thomson South-Western, Mason, OH, ISBN #0-324-40082-9. Please visit and bookmark the companion web site for this text, as it contains useful information: <[AWZ Textbook Companion Website](#)>

Grading

Homework (see course schedule for assignments and due dates)	30%
Case Exercises (see course schedule for cases and due dates)	30%
Final Exam	40%

The Final Exam will be open book and open notes. Examples of previous final exam questions will be made available on the Blackboard course web site (see <http://courses.pepperdine.edu>).

Homework (or skill-building exercises) will be assigned throughout the semester. Please hand in a **very concise summary** of your results for each exercise (e.g., an annotated spreadsheet containing your results). Each homework problem will be graded as a 10 (perfect), 8.5 (good attempt), 7 (attempt), and 0 (non-existent). Since we will review homework solutions in class, *all homework assignments are due at the beginning of class on the date due*. Late homework will be accepted only with prior consent, and will be assessed a minimum penalty of 3 points. Electronically submitted homework is discouraged, and accepted only with prior consent.

Two cases will be completed in self-selected groups of three to four students. If you have problems finding a group, please see me. At minimum, your case write-up (report) should address the questions posed. Please use the following format for case reports: a one page executive summary, a description of analysis section (maximum four pages), and an appendix. The executive summary should be a clear statement of your findings using **non-technical language**. It should entice the reviewer to want to read the analysis section. Be as clear and concise in the analysis section as possible. Relegate any detailed supporting material (e.g., figures, tables, and equations) to an appendix and reference it appropriately. The entire report should use 1.5 line spacing, 12-point font, and one-inch margins. No late case assignments will be accepted since solutions will be handed out or covered in class on the day they are due. If you encounter a grading problem on a case study, please see me.

Attendance Policy

I do not keep an attendance record, but it is *strongly* advised that you attend all class sessions, as the course material is cumulative, and it can be difficult to catch up if you fall behind in the course. If it is unavoidable that you must miss class, you should obtain notes from a colleague and review them before the next class meeting if possible.

Course Computing:

Your text includes the software you need for this course (with the exception of *Microsoft Excel*). We will be working through examples using this software during classes, so students are encouraged to bring their notebook computers to follow along. I will post any and all electronic information used in the course at Blackboard course web site (see <http://courses.pepperdine.edu>). Please check this periodically for updates. Additionally, I distribute email notices after I make important additions to the course site.

Decision Sciences Departmental Policies:

1. Syllabus:

- a. Students are requested to familiarize themselves with the syllabus before the first class (document accessible via Blackboard).
- b. Refer to the syllabus continually during the semester for recommended material for class preparation and for assignments.

2. Attendance

- a. Students should show up on time and stay for the entire class. If you must leave class early for some reason, please notify the professor about this before class or at the break. The same applies if you know you will be late for class – email the professor and/or classmate(s), as appropriate.
- b. Students should promptly return from breaks.
- c. If a student must miss a class, he/she needs to give as much advance notice as possible to the professor and have a proactive plan about making up the class material. Also he/she needs to notify group members and keep them informed. If the professor teaches another section, inquire about sitting in on another night.
- d. At the beginning of the semester, students should notify their work supervisor about scheduled exams. If work travel plans still conflict with an exam, it is the student's responsibility to be proactive in making arrangements to schedule a make-ahead or make-up exam. If the professor teaches multiple sections of the course, it might be possible to take the exam on another night, or take it on another day at the center.

3. Student Class behavior

- a. Turn off cell phones or to vibrate only; students should quietly leave the room if they have to take a phone call. Even in the hallway, cell phone conversations should be in a low tone and not obtrusive.
- b. Students should extend the kind of courtesy they wish to receive when they are presenting/discussing. Side conversations should be brief and not disruptive.
- c. Food rules differ by professor, so check what is allowed. At a minimum, food should be consumed quietly and you should not leave a mess.
- d. The use of laptops is usually encouraged during class, but should be for class work only and not for surfing the Internet, emailing class members, listening to music or watching videos during class.

4. Student Channels of Communication

- a. Questions about the center (room, copying facilities, etc.) should be directed to the front desk at your center, and if still a problem, to the Center Director.
- b. Questions about your program, future offerings, and so forth should be directed to your Program Director at your center.
- c. Concerns about the class and feedback, should first be directed to the professor. Students have a right to request of a professor clarification of grading. If classroom or grading concerns are still not resolved, please contact Dr. Rick Hesse, Academic Chair Decision Sciences, rickhesse@Pepperdine.edu with your concerns in writing. The process then moves up to the Associate Dean and finally the Dean of GSBM. Any attempt to bypass this chain of command will result in delays as the message will be sent back down to the appropriate level.

University Policies:

Conduct

The University expects from all of its students and employees the highest standard of moral and ethical behavior in harmony with its Christian philosophy and purposes. Engaging in or promoting conduct or lifestyles inconsistent with traditional Christian values is not acceptable.

The following regulations apply to any person, graduate or undergraduate, who is enrolled as a Pepperdine University student. These rules are not to be interpreted as all-inclusive as to situations in which discipline will be invoked. They are illustrative, and the University reserves the right to take disciplinary action in appropriate circumstances not set out in this catalog. It is understood that each student who enrolls at Pepperdine University will assume the responsibilities involved by adhering to the regulations of the University. Students are expected to respect order, morality, personal honor, and the rights and property of others at all times. Examples of improper conduct for which students are subject to discipline are as follows:

- *Dishonesty in any form, including plagiarism, illegal copying of software, and knowingly furnishing false information to the University.*
- *Forgery, alteration, or misuse of University documents, records, or identification.*
- *Failure to comply with written or verbal directives of duly authorized University officials who are acting in the performance of assigned duties.*
- *Interference with the academic or administrative process of the University or any of the approved activities.*
- *Otherwise unprotected behavior that disrupts the classroom environment.*
- *Theft or damage to property.*
- *Violation of civil or criminal codes of local, state, or federal governments.*
- *Unauthorized use of or entry into University facilities.*
- *Violation of any stated policies or regulations governing student relationships to the University.*

Disciplinary action may involve, but is not limited to, one or a combination of the alternatives listed below:

- ***Dismissal*** – *separation of the student from the University on a permanent basis.*
- ***Suspension*** – *separation of the student from the University for a specified length of time.*
- ***Probation*** – *status of the student indicating that the relationship with the University is tenuous and that the student's records will be reviewed periodically to determine suitability to remain enrolled. Specific limitations to and restrictions of the student's privileges may accompany probation.*

Policy on Disabilities: *Assistance for Students with Disabilities*

The Disability Services Office (DSO) offers a variety of services and accommodations to students with disabilities based on appropriate documentation, nature of disability, and academic need. In order to initiate services, students should meet with the Director of the DSO at the beginning of the semester to discuss reasonable accommodation. If a student does not request accommodation or provide documentation, the faculty member is under no obligation to provide accommodations. You may contact the Director of Disability Services at (310) 506-6500. For further information, visit the DSO Web site at: <http://www.pepperdine.edu/disabilityservices/>

Course Schedule:

Session	Topics	Reading*	Assignment**
Sept. 2	<i>Microsoft Excel</i> Basics Review, Describing Data - Summary Measures, Confidence Interval Estimation	Chap. 3.1-3.7, Chap. 9.1-9.10, Chap. 10.1-10.2	<i>Excel</i> Tutorial
Sept. 9	Hypothesis Testing	Chap. 10.3-10.8 Chap. 11.0-11.4	Prob. 9.5 Prob. 9.24
Sept. 16	Correlation, Simple Linear Regression, Multiple Linear Regression	Chap. 11.5 Chap. 12.3 Chap. 11.6.1	Prob. 10.3 Prob. 10.18
Sept. 23	Regression Inference, Dummy Variables, Model Selection	Chap. 12.5-12.6 Chap. 11.6.3 Chap. 12.4 Chap. 12.8-12.9	Prob. 11.7 Prob. 11.17 Case Report 1
Sept. 30	Multicollinearity, Outliers, Regression Assumptions Introduction to Time Series and Forecasting, Moving Averages, Simple Exponential Smoothing	Chap. 13.0-13.2 Chap. 13.3.2 Chap. 13.6 Chap. 13.7-13.8.1	Prob. 11.28 Prob. 12.19
Oct. 7	Regression Forecasting Techniques, Trends, Seasonality	Chap. 13.4.1 Chap. 13.9.2 Chap. 13.9.3	Prob. 13.29 Prob. 13.37 Case Report 2
Oct. 14	Final Exam		

* Chapter readings are found in the AWZ text.

** The problem assignments (“Prob.”) are listed by chapter number and problem number in the AWZ text (e.g., Prob. 9.5 refers to chapter 9, problem 5).

Homework assignments are listed according to the class session in which they are due (e.g., Probs 9.5 and 9.24 are due at the beginning of class on Sept. 9).