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

DR. MATIN LACKPOUR  
MBFE 656.82  
QUANTITATIVE & STRATEGIC DECISION ANALYSIS  
Fall 2003  
TUESDAYS  
6:00 PM -10:00 PM  
PASADENA CENTER  

SYLLABUS  

First class meeting will be held on August 26th, 2003
Quantitative & Strategic Decision Analysis
MBFE 656.82
FALL 2003

Dr. Matin Lackpour
The George L. Graziadio School of Business and Management
Pepperdine University Plaza
400 Corporate Pointe
Culver City, Ca. 90230

Office Phone: (213) 367-6706
E-mail address: MLackpour@email.uophx.edu
Fax Phone: (661) 298-1507
Home Phone: (661) 298-8685

Course Description

Quantitative & strategic analyses is an exciting area of management that has a profound effect on production and productivity. Indeed, few other activities have as much impact on the quality of our lives. The goal of this course is to present the field of operations as realistic, practical activities that improves the quality of our lives. This course includes a blend of topics from information systems, industrial engineering, management science, project management, and statistics. We cover a wide range of problems and utilize many qualitative and quantitative methods and tools to solve them. Problems may be behavioral, organizational, or technical in nature and tactical or strategic in scope. Solutions to these problems are analyzed using results from applied psychology to applied mathematics.

Course Objectives

1. To enhance the student’s knowledge and understanding of the scope of operations management, different types and phases of manufacturing processes, production systems, and functional activities associated with management science.

2. To enable the students to use appropriately and correctly qualitative, quantitative, and analytical techniques used in solving operations problems.

3. To familiarize the students with operations management in global environment.

4. To familiarize the students with new information techniques, practices, and the latest operations technology and communication advancement.

5. To enhance student's knowledge and understanding of the scope of business ethics in strategic management field
The above mentioned course objectives will be pursued within the context of the following special topics or subject areas of study:

- Quantitative and Qualitative Analysis in management.
- Probability & Forecasting
- Statistical Quality Control
- Linear Programming.
- Resource management
- Project management.
- Simulation Modeling.
- Global and international issues.

Texts and Course Materials


Recommended Readings:


Group Presentation

The class will be broken into small groups for the purpose of making a presentation about the details of the operations of one organization. The team should cover the details of some of the quantitative analyses used in that organization. The total presentation must be at most 30 minutes and no more than 10 minutes per student.
Presentation Instructions:

A. Consider one organization (manufacturer or service provider) and get approval from the professor no later than the second week of the class. Use Internet, do library research, field research and interviews to gather information regarding the operations of that organization.

C. As a group, share the details of the selected operations and the applied quantitative methods with the class.

D. You will be graded by the members of your class.

E. Enhance your presentation in any creative way you can considering university rules and regulations.

F. Discussion of business ethics is recommended.

G. Please see my Guideline provided separately.

Teams may select one of the following operations for presentation.

1. Stock broker
2. Hotel
3. Restaurant
4. Resort
5. Retail store
6. Church
7. University
8. Collection agency
9. Telephone company
10. Electric company
11. Gas company
12. Cable company
13. Distribution center
14. Museum
15. Library
16. Manufacturing plant
17. Chain store
18. Chain restaurant
19. Car race
20. Games
21. Casino
22. Immigration
23. CIA
24. FBI
25. Auto manufacturing
26. Bank
27. IRS
28. IMF
29. United Nations
30. US army
31. Attraction places
32. Movie production
33. Consulting
34. WTO
35. United nation
Presentation Grading Criteria:

1. Meet time requirements.
2. Evidence of thorough presentation.
3. Clarity of presentation.
4. 3-5 page, single space typewritten summary (not outline) from each team.
5. Creativity.

Please see the guideline for more detail on page 11-12.

Team Project:

Begin preparing a 15 - 20 page project, due in Week / Workshop twelve, thirteen, and fourteen. Please follow the guideline given separately later.

You may choose one of the following topics (see below) to do your final project on. However, the selected topic needs to be approved by the professor no later than the date the midterm exam is scheduled. You could use other sources and other topics of your interest as long as it is related to Operational Management or Business Research. No late report is accepted.

- a) Product and service design
- b) Processes and technologies
- c) Facility layout
- d) Human resources in OM
- e) Supply chain management
- f) Inventory management
- g) Operational decision-making tools
- h) Enterprise resource planning
- i) Scheduling
- j) Just-in-Time systems
- k) Waiting line models for service improvement
- l) Project management
- m) Productivity
- n) Operations in global environment
- o) Inventory planning
- p) Purchasing
- q) DRP
- r) Forecasting
- s) MRP
- t) Inventory planning
- u) TQM
- v) Technology in operations
- w) Business ethics in operations
- x) Six sigma
- y) E-commerce and operations management
- z) Capacity planning
- aa) Applications of linear programming
- bb) Applications of waiting line models
- cc) Applications of economics in operations
Grading

There will be a total of 1000 points available. The final grade will be based upon the following:

Assignments (30 points each)  300
Midterm Exams (100 points each)  200
Final Exam                 250
Team project & Presentation              125
Participation and Attendance             125

A university scale will be used, i.e.,

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>94 - 100%</td>
<td>A</td>
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<td>90 - 93.9%</td>
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<td>87 - 89.9%</td>
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<td>84 - 86.9%</td>
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<td>60 - 63.9%</td>
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<tr>
<td>&lt; 60%</td>
<td>F</td>
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Attendance Policy

You are expected to come to class prepared, form study groups, and assist your peers. You earn credit by participation, evaluated by your class attendance, and positive contribution to the class. Each student is expected to assist in creating an environment conducive to the learning process. Students must make an effort to attend all classes. In the event of an absence you should notify the professor as soon as possible. Missing a class will put you at a significant disadvantage for both learning and performance in the class. It is your responsibility to get class notes and any assignments from a classmate. **Part of your grade is based on your in class participation regarding the different presentation topics presented by your classmates.** This is vital to your understanding of the material and to the overall learning process. Your participation grade will be based on the quality of your contributions and active involvement in the class. **Students must deactivate beepers and cellular phones in the class. The noise disturbs the class.**

Attendance Criteria:

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<tr>
<td>Absent :</td>
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<tr>
<td>0 - 1 class session</td>
<td>0</td>
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<tr>
<td>2 class sessions</td>
<td>20</td>
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<td>3 class sessions</td>
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<tr>
<td>4 class sessions</td>
<td>80</td>
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<tr>
<td>5 class sessions</td>
<td>100</td>
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With this criteria there is no excused absence. **Excessive tardiness will result in the reduction of your class participation grade.**
Assignments

There will be five assignments, 30 points each.

Examinations

There will be three examinations, two mid-term tests and one final. The questions will be a combination of multiple choice as well as direct essay questions on assigned materials. I will provide you with a study guide to help you through your preparation prior to each exam. **The final exam will be partially comprehensive.** No make-up exam will be given except for compelling reasons and unless prior arrangements are made with the professor.
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.”

GSBM Catalog, pgs. 221-222.

Policy on Disabilities

**Assistance for Students with Disabilities**

“Students with disabilities, whether mental or physical, are encouraged to contact the Equal Opportunity Office before the academic year begins or soon after classes are in session. This office will assist each student by providing general information about campus facilities and available resources. The office will assist in providing reasonable accommodation to students with disabilities pursuant to applicable laws. Inquiries should be directed to equal opportunity officer, (310) 506-6500. (Students who wish to file a formal grievance should refer to the “Nondiscrimination Policy,” which is listed in the “Legal Notices” section of this catalog.)

GSBM Catalog, pg. 33.
## TENTATIVE SCHEDULE
(Subject to changes) PASADENA CENTER - TUESDAYS

<table>
<thead>
<tr>
<th>WEEK</th>
<th>QUANTITATIVE ANALYSIS FOR MANAGEMENT RENDER &amp; STAIR</th>
<th>PROBLEMS</th>
<th>PRESENTATION</th>
<th>ASSIGNMENTS &amp; EXAMS</th>
<th>SPEAKERS</th>
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<tr>
<td>8/26</td>
<td>Introduction Chapter 1</td>
<td>Hand-out</td>
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<td>Probability Concepts Chapter 2</td>
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<td>Probability Concepts and Decision Trees, Chapter 3</td>
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<td>Normal Distribution, M3-I Continued</td>
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<td>Confidence Interval and Hypothesis Testing, M3-I</td>
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<td>Mid-term #2</td>
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<td>WEEK</td>
<td>QUANTITATIVE ANALYSIS FOR MANAGEMENT RENDER &amp; STAIR</td>
<td>PROBLEMS</td>
<td>PRESENTATION</td>
<td>ASSIGNMENTS &amp; EXAMS</td>
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<td>11/18</td>
<td>Scheduling and CPM Analysis, Chapter 13 Review for Final &amp; Presentation-Cont.</td>
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<td>Team #D, E, F</td>
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<tr>
<td>12/2</td>
<td>Final Exam</td>
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Final Research Project
Proposal Guidelines

Project proposal Guidelines

Select a researchable problem and prepare a Research Operational Managerial Proposal utilizing these guidelines. Several formats are acceptable; however, you must include the content discussed below.

Statement of the Problem

This section often starts with a sentence or two that provides the general significance of the investigation. This brief introduction is called the Problem Statement. The remainder of this section should further explain the significance and magnitude of the issue at hand. Background information is helpful in providing a clear understanding of the extent of the problem. Relevant definitions are also helpful.

Statement of Purpose

This section describes the purpose or objectives of the research and is crucial element of any research proposal. These commonly are the major research questions and/or hypotheses that provide a formalized focus for collection of data and interpretation of results.

Review of Related Literature

The literature review provides an objective, systematic, and critical analysis of existing studies that are relevant to the research questions and/or hypotheses. The review should describe, summarize, and analyze the state of the art of knowledge about the topic including any theoretical or empirical basis, which provide justification for the conducting of the study.

General guidelines in preparing the Statement of Problem and Review of Literature Sections.

- Consider –what has been studied on this problem, when was it studied, how the problem was researched, where the problem has been investigated, and who have been studied.
- Limit your review to key investigations that pertain to the implied independent and dependent variables in the research or hypotheses and to the relationships and/or conditions stated in the purpose of the study.
- The review should be linked logically and organized in such a way as to point out the present state of knowledge in this topic area.
- The review should indicate any gaps or inconsistencies that exist in the present body of knowledge and how this study will contribute to filling these gaps.
- When discussing previous investigations, key areas should be summarized as briefly as possible. Key areas include: problem statement, the research design (method, sample characteristics and size, population to which findings were generalized, presence or absence of controls, etc. etc), methods of collecting and analyzing data (instruments – Surveys, validity, reliability) data collection procedures, statistical techniques, findings and/or conclusions, and brief critique of the study (you do not need to include all these areas for all studies. Depending on how you are utilizing the study in your review will assist in determining which of the key areas are needed).
Methodology

This section of a proposal provides a clear and specific plan, which guides the investigator. Components of this section include but not limited to: research design, population & sample, sampling techniques, instrumentation, procedures for collecting data, and proposed procedures for data analysis.

The methodology should also speak to protection of human subjects if necessary (anonymity), operations definitions, validity and reliability of instrumentation (survey forms), and any apparent assumptions and limitations of the study.

Reference List

APA format preferred

Appendices

Include relevant material, which supports the clarity of the proposal
(For example, the instrument to be utilized if it exists)

Suggested length, depth and weight:

15-20 page comparable to 8 ½ X 11 paper
Literature Review process includes 5-10 articles or references
Section presenting problem and purpose, approximately half the length of the section presenting the conceptual/theoretical discussion of the literature

125 points total Project, including references.