BU324 F99

SYLLABUS

BU 324 Quantitative Methods in Management
Chaminade University

Instructor: Barbara P. Street, Ph.D.
Office Hours: MWF 2-3pm, Tr 12:30-1:30, or by appointment in Kieffer Hall Business Faculty Study, cubicle CC ph: 739-4609
Textbook: Quantitative Analysis *for* Management by B. Render and R Stair, 7th Ed. Published by Allyn and Bacon, 1999

COURSE **GOALS:**
The purpose of this course is to provide the student with the skills to apply various quantitative techniques to solve the types or problems that organizations and managers face in the real world. To acquire these skills, the student will need to study both the pertinent mathematical models and their assumptions and limitations, and learn how these models are utilzed in computerized solutions.

COURSE **OBJECTIVES:**
By the end of the semester the student will be able to:

1. **Recognize problems, *which* may be solved using one of the models studied in this class, and appropriately identify the correct model for solution.**
2. **Show understanding of the assumptions, parameters, and data required for each of the decision models studied in class.**
3. **Be able to work solutions to problems utilizing the models studied, manually and/or with the aid of a computer.**
4. **Be able to discuss, for the various models studied, how changes in the initial problem will impact the ultimate solution.**

COURSE REQUIREMENTS:

1. **Class attendance and participation is imperative. Students must be present, pay attention, and take part in discussions in order to earn attendance points described in the grading section. Each class period, two students will be assigned to serve as "aides" during that session, which will involve such responsibilities as writing on the board, inputting into the computer, and doing other such tasks to facilitate the class session.**

2. **Completing reading and written assignments on time is necessary. Students can expect written work diily. Solutions to homework problems are to be written up with an explanation of each step in solving the problem. This will be explained and demonstrated in class.**

3. Exams and quizzes must be taken as scheduled. The lowest quiz grade may be dropped when the grades are calculated. NO make-up quizzes will be given. Make-up midterms will only be given to those students who have informed Dr. Street of their absence BEFORE the exam was administered to the class.

4, Each Student will keep a "learning log:, in which the most important points of a class session are recorded, and the student record hs/her thoughts, comments, or questions on that topic. These logs will be collected periodically and graded for both thoroughness and thoughtfulness of the contents. Students may refer to their learning logs during quizzes and exams.

GRADING POLICY:

Midterm Exam:	100 points	A: **450-500 points**
Quizzes (16 points /quiz)	100 points	B: **400-449 points**
Midterm Exam	100 points	C: **350-399 points**
Homework (2 points/problem)	**100 points**	D: **300-349 points**
Learning Logs	50 points	F: **below 300 points**
Attendance/Participation	**50 points**	
TOTAL POINTS	**500 points**	

Please bring a red or pencil to all classes!

August
30
Introduction to Course
Read Chapter 1 for next class

September

Quantitative Decision Making
Complete 2-14 thru 2-19 for the next class
Review Chapter 2 for next class

3
Convocation No Class

8
Probability
Complete problems 2-36, 2-37. 2-38, and 2-40 for next class
Read Chapter 3 to page 85 for next class

10
Decision Theory
Read chapter 3 to page 90 for next class

13
Decision Making Under Risk
Complete 3-11, 3-16 and 3-18 for next class
Read chapter 3 to page 95

15
Decision Making Under Uncertainty
Complete 3- 8, 3-13 , and 3-14 for next class

17
Marginal Analysis
Complete 3-22 for next class
Read Chap. 4 to page 123 for next class

20
Decision Trees
QUIZ
Complete 4-14 for next class
Read Chapter 4 to page 125 for next class

22
Decision Trees
Complete 4-12, 4-21 for next class
led Chap 4 to p 129 for next class

24
Revising Probabilities
Complete 4-17, 4-19 for next class

27
Revising Probabilities continued
Complete 4-13 for next class
read chap 4 to end for next class

29
Utility
Complete assigned problem for next class
Read chap. 5 to page 163 for next class

October

1
Forecasting
Complete 5-10 for next class
QUIZ
Read Chap 5 to p175 for next class

4
Time-Series Forecasts
Complete 5-11, 5-12, 5-13 for next class
Read Chap 5 to end

6
Causal Forecasts
Complete 5-31,5-32 for next class

8
Computer Forecasting
complete 5-34,5-35, 5-38 for next class
read ch 6 to 208

13
Inventory
complete 6-1 and 6-2
QUIZ
read chap 6 to p 215

15
EOQ Inventory Models
complete 6-17, 6-22
read ch 6 to p. 220

18
EOQ Models Without Instantaneous Receipt
complete 6-18,6-24, 6-31
read ch 6 to p 223

20
Quantity Discount Models
complete 6-25, 6-33
read ch 6 to end

22
Safety stock
complete 6-35, 6-39

25
Review

27
MIDTERM EXAM
Read chap. 7 to p. 255

29
Linear Programming
Complete 7-2 and 7-8 for next class
Read Chap 7 to p. 257

Formulating LP problems
Read chap 7 to p 277
set up 7-14, 7-16 as LP problems

Graphical solutions to LP problems
Complete 7-22, 7-23 for next class
Read chap 7 to end

5

Special Cases in LP problems
Complete 7-27, 7-28. 7-29,7-32
Read Chap 8 to p.320

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Computer Solution to LP problems
Complete 8-1, 8-2, 8-3 for next class
QUIZ
read Chap 8 to end

10

Computer Solution to LP problems
Complete 8-4, 8-5, 8-8 for next class
Read chap 9 to p. 360 for next class

12

Simplex Method discussed
Complete Worksheet for next class
Read Chap. 11 for next class (omit sec. 11.3)

15

Goal Programming and Integer Programming
Complete 11-14, 11-17,11-23, 11-25 for next class
read chap 13 to p. 569

17

Project Management: PERT
Complete 13-12,13-13, and 13-14 for next time
QUIZ
Read Ch 13 to p 583

19

Pert continued
Complete 13-16, 13-17, and 13-18 for next class
Read chap 13 to p 583 for next class

22

PERT COST
Complete 13-22 for next class
Read chap 13 to end for next class

24

CPM/Crashing
Complete 13-23 for next class
Read chap 14 to p. 623 for next class

wait Lines
Complete 1141 through 1149 for next class
QUIZ
ReadChap 14 to p. 629

December

1

Single Channel Queuing System
Complete 1412,1414 for next class
Read chap 14 to p. 633

3

Multiple Channel Queing Models
Complete 14-17,14-18 for next class
QUIZ
read chap. 14 to end

6

Constant Service Time Models
Complete 14-23 for next class

Review

10

Review

Final Exam
Wednesday Dec. 15 --