I. IDENTIFYING INFORMATION

Course: MSA 640

Course Title: Quantitative Applications in Administrative Decision Making

CRN: 22018996

Term: 20074

Location: Fort Hamilton

CLASSROOM LOCATIONS:

Cohort #42 - MSA 685 - Education Center, bldg 218, - 1st floor classroom

Cohort # 43 - HSC 571 - Education Center, bldg 218, 1st floor classroom

Cohort # 44 - MSA 640 - Education Center, bldg 218 - 2nd floor classroom on the following dates: 8/17-18, 9/7-8. Classes will be held in bldg, 218 1st floor 9/21 and 9/22.

Course Dates: 8/17, 8/18, 9/7, 9/8, 9/21, 9/22/2007

Course Days and Times: Fri. 06:00 PM - 10:00 PM, Sat. 08:00 AM - 05:00 PM

Prerequisites: STA 282/382

Instructor: Dr. Leland Gustafson

Phone Numbers: 770-834-4645

Fax Number: 775-256-3026

E-Mail Address: LVG55@yahoo.com

Office Hours: Evenings: 7 - 10 pm

Academic Biography:

I have taught for CMU since 1981 as an adjunct professor. I received the A.B. degree in Economics and Mathematics from Westmar College in Le Mars, Iowa. I received the M.S. and Ph.D. degrees in Economics from Florida State University. During the past 35 years, I have taught at a number of schools including East Carolina University, Mercer University, and Troy State University. Statistics, Quantitative Analysis, Managerial Economics and Financial Planning are the courses I have taught most often. My research interests have been in the area of building mathematical and statistical models for financial planning.
II. TEXTBOOKS AND INSTRUCTIONAL MATERIALS

Textbooks and Course Materials:
Title: Quantitative Methods for Business
Author: David R. Anderson, Dennis J. Sweeney & Thomas A. Williams
Edition: 9th ed./2004 or 10th ed./2006
ISBN: None
Publisher: Thomson South-Western
Required? Yes

Supplemental Materials:
Students MAY USE THE 9th EDITION of the Anderson, Sweeney, Williams text rather than the 10th edition listed above.

Below you will find A LINK TO PRACTICE PROBLEMS & PROBLEMS TO BE GRADED

COPY/PASTE or CLICK THIS LINK TO GET problems.

http://www.westga.edu/~lvg/CMU/problems.pdf

III. COURSE DESCRIPTION

This course studies stochastic and quantitative analytical tools and concepts which can be used to make optimal decisions in the pursuit of such organizational goals as cost efficiency, service delivery and profit. Concepts include probability theory, statistics, decision theory, inventory controls, linear models, linear programming, network analysis and simulation.

Supplemental Description:
A section on forecasting will be covered.

IV. COURSE GOALS AND OBJECTIVES

The general objective of this course is to develop and enhance the student's problem solving and decision-making capabilities in an administrative environment. Specifically, the student when confronted with a management problem should be able to:

a. develop the capacity to work in situations requiring quantitative analysis,
b. conceptualize the problem within an analytical and statistical framework,
c. understand the basic analytic and statistical models,
d. assess and use appropriate analytic results in the decision-making process, and
e. identify the capabilities and limitations of various quantitative decision-making techniques.

Supplemental Description:
None

V. METHODOLOGY

This is a problem-solving course. Much of the class time will be used to expand on the explanations provided in the text as well as developing working examples. The lectures will center on explaining the techniques presented in the text. Students will be given ample time and encouragement to ask the instructor to explain any assigned or unassigned problems in the text.

VI. COURSE OUTLINE/ASSIGNMENTS

Pre-class Assignment:

PRIOR TO FIRST WEEKEND ASSIGNMENTS

Probability and Statistics Review (Students’ responsibility) Chapter 2
Chap 3 Sec 6

Outline of Session Topics and Activities:

FIRST WEEKEND

Decision Analysis: decision making under uncertainty, Chapter 4
decision trees, expected value of perfect information. Secs 1 - 3
Network Models: PERT/CPM Chapter 12
Secs: 1,2
Inventory Models: deterministic demand Chapter 13 Secs: 1,4

SECOND WEEKEND

First Test
Forecasting Chapter 6 (Sec 1-3)
Waiting-Line Models: one channel and multi-channel Chapter 14
Secs: 1- 5

THIRD WEEKEND
Continuation of Forecasting and Waiting-Line Models:
Review and Second Test

Post-class Assignment:
None

Assignment Due Dates:

HOMEWORK ASSIGNMENTS

‘A’ The following problems are suggested as review for the two tests:

Chapter 4: 1, 2, 3, 4, 5, 7, 14

Chapter 12: 1, 3, 5, 11, 12 (SEE Chp. 12 BELOW), 15, 17, 19

Chapter 13: 1, 4, 6, 20, 21, 22 Chapter 7: use graph paper, 15, 16, 17, 24, and 27, handouts

Chapter 6: 1, 2, 3, 4, 5, 7, 11, 13. 14, 15, 16, 21, 22, handouts

Chapter 14: 3, 4, 7, 11, 12, 16, 17 (OMIT a), 22 (OMIT a & f), 23, handouts

Chapter 12, prob. 12-d: Find the EXPECTED PROFIT given:

T < 23 days - profit = $10,000 Ans: 12-d
T > 24.5 days - profit = $20,000 σ = 1.02

Otherwise profit will be $15,000 E(π) = $19,342

SOLUTIONS TO PART 'A' PROBLEMS: http://www.westga.edu/~lvg/CMU/Solutions10ed06.htm

‘B’ The following problems must be turned in for grading: USE 8 ½ x 11 PAPER ONLY & WRITE ON ONLY ONE SIDE - ROUND ALL DATA TO AT LEAST TWO DECIMAL PLACES - STAPLE ALL HOMEWORK TOGETHER (do not use a folder) 90 points for correctness and 15 points for clarity & neatness.

Due the Second Weekend prior to the test

1. Chapter 13: Handout(See webpage below)

2. Chapter 12: Handout(See webpage below)
Due the Third Weekend prior to the test

3. Chapter 6: Handout (See webpage below)

4. Chapter 14: Handout(See webpage below)

WEBPAGE with Assigned Homework Problems and Practice Problems:
http://www.westga.edu/~lvg/CMU/problems.htm

Student Involvement Hours:
Time necessary to learn material ??

500-Level Courses:
None

VII. CRITERIA FOR EVALUATION

Type of Performance:
All materials turned in for grading will be assigned grades within four days of the date they were due.

Evaluation Criteria:
The students course grade will be determined as follows:

A. Your test average will count 70% of your final course grade.

B. The problems assigned to be turned in for grading will count 30% of your course grade

C. Students may bring Two (2) sheets of paper with notes on both sides to help take each test

Late Assignments:
Ten points will be taken off for each assignment turned in late.

Make-ups and Rewrites:
No make up exams with out prior approval

Attendance Policy:
Attending class is highly recommended and a good way to aid in the learning process. Attendance historically has been directly correlated to student test scores.
Class Participation:
Students are encouraged to ask questions. However, class participation has no affect on your grade.

Grading Scale:
90-100 = A, 86-89 = A-, 82-85 = B+, 72-81 = B, 60-65 = C+, 55-59 = C, 50-54 = C-
(Does not count towards a graduate degree), < 50 = E

Other:
1. Incomplete: [d1] The (I) Incomplete is a temporary grade used in cases when a student is unable to complete course requirements because of illness or other justifiable circumstances. An (I) Incomplete is assigned in cases in which the student has completed satisfactorily the major portion (50%) of the course requirements and has the ability to complete the remaining work without re-registering for the course. Further information on (I) Incompletes can be found in the current Bulletin.
2. Copies of Assignments: [d1] Attention CMU students: It is your responsibility to retain a copy of any materials that you mail or hand in to a center or to your instructor. This includes, but is not limited to, exams, assignments, cases, or reports.

VIII. SUPPORT SERVICES AND OTHER REQUIREMENTS

OCLS [d1] CMU offers you a variety of library services through Off-Campus Library Services. Check the OCLS website, http://ocls.cmich.edu, for more information and our current hours. Reference Librarians provide help using research tools such as: the library catalog and research databases and help you find information related to your research topic. Document Delivery provides the specific books and journal articles you request. You can order up to 50 items per class, per week from Document Delivery. However, only 20 requests will be taken over the phone. Requests over 20 can be faxed or e-mailed.

Reference Librarians contact information:
1. Toll-free phone: 1-800-274-3838
2. Email: oclsref@cmich.edu

Document Delivery contact information:
1. Toll-free phone: 1-800-274-3838
2. Toll-free fax: 1-877-329-6257
3. Email: oclibsve@cmich.edu

General:
1. Academic Dishonesty: [d1] Written or other work which a student submits must be the product of her/his own efforts. Plagarism, cheating and other forms of academic dishonesty, including dishonesty
involving computer technology, are prohibited. Further information on Academic Dishonesty can be found in the current Bulletin.

2. ADA [d1] CMU provides individuals with disabilities reasonable accommodations to participate in educational programs, activities and services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should contact Ms. Carmen Ceja-Blohm, at (800) 950-1144, extension 2199 or email her at cejab1c@cmich.edu, at least 3 weeks prior to registering for class. Students may find additional ADA information and forms at http://www.cel.cmich.edu/ada/default.html Note to faculty: CMU Administration will notify you if applicable; otherwise, the student will provide a “Notification Letter to the Instructor” outlining the accommodations the student is approved to receive.

IX. BIBLIOGRAPHY


Schuyler, J.R., Decision Analysis in Projects, Upper Darby, PA: Projects Management Institute, 1996