BAN 530
Quantitative Tools for Business
Spring 2008

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Office Hours: Tu 10:00 – 11:00
 2:00 -- 2:30
 3:00 – 4:30
W 1:00 -- 4:00
Th10:00 – 11:00
 2:00 – 3:30
 3:00 – 3:30
TUC 5:00-6:00
Others by appt.

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Instructor: Dr. Valerie P. Muehsam
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Office Hours: Mon - Thurs
 10:00 a.m.-Noon

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Th Only at TUC
5:00 – 6:00 pm

Others by appt.

REQUIRED TEXTS:

 Heizer, J. & B. Render. *Operations Management*. 8th edition. Upper Saddle River, NJ: Prentice Hall, 2006. (Be sure your copy comes with the free Student CD in the back which contains Weiss, H. *POM/QM for Windows*, v. 3.0, 2006.)

COURSE DESCRIPTION:

An introduction to a variety of quantitative tools used in the business sector. Emphasis will be placed on statistical analyses and operations. Topics include descriptive statistics, normal distribution theory, central limit theorem, estimation, hypothesis testing, linear programming, forecasting, inventory management, JIT, productivity, competitiveness & strategy, aggregate planning, and facilities layout. This course does not apply to the 36-hour graduate credit hour requirement of the MBA degree program or the MS in Finance degree.

Prerequisites: PG or Grad status. Before enrolling in BAN 530, it is recommended that you have had MGT 380 or are concurrently enrolled in MGT 380.

COURSE OBJECTIVES:
1. To provide coverage of current factors of production and techniques applied in the design and operation of productive organizations.
2. To identify current issues faced by production and operations managers.
3. To provide opportunity for application of the course material in realistic case situations.
4. To introduce the students to the use of statistics and mathematics as business tools in the face of incomplete knowledge. Emphasis will be placed on how information from a sample may be used to describe a population or to make inferences about a population.

COURSE STRUCTURE:
The lectures will emphasize concepts, motivation, interpretation, and present vocabulary. Statistical formulas will be given and discussed on a heuristic basis. Mathematical derivations of the formulas will not be presented. Homework problems will be assigned, but not collected. The student is strongly urged to use the exercises in the text as practice problems.

COURSE REQUIREMENTS:
    1. Text/Handouts
        Students are expected to complete the readings prior to their being discussed in class.
    2. Homework Problems
        This is a quantitatively oriented course. Problems assigned as homework will be reviewed upon request at the next class meeting. Homework solutions will be available for downloading through the BAN 530 course web site. **Consider the homework problems to be sample examination questions.**
    3. Groups/Case Studies
        The class will be divided into small groups. The purposes of the groups are to:
            a) Facilitate a cooperative effort within the groups (such as group study for exams, help with homework, discussion of case) in order to maximize each student's performance in the course. Research has shown that the effective use of study groups can increase student performance by a half letter grade.
            b) Enable group analysis of the case studies.
        Case study reports are to be typed using standard business report format. Detailed information, raw data, computer printouts should be included in appendices to the report. One point will be deducted for each typographical error, so pay attention to proofreading. **Cases are due at the beginning of class on the due date—no late case study reports will be accepted. ONLY group case reports will be accepted - you must join a group in order to receive credit for the case. Individual cases will NOT be accepted.**
        Virtual **group meetings are acceptable.** Group members should exchange telephone numbers and e-mail addresses. **Provide Dr. Sower with a list of group members, telephone numbers, and e-mail addresses by 2/7/08.**
    4. Computer Accounts
        Each student must establish access to the Internet. **Send Dr. Sower an e-mail message no later than 1/24/08.** The message should state that you have

successfully accessed the BAN 530 web site and whether you wish to have an e-mail link on the web site. The BAN 530 web site will be used as a primary means of student-instructor communication. Students should, **at a minimum**, check the web site at least once a week.

E-mail (available 24 hrs. per day) is considered to be a form of "virtual office hours." We try to answer all e-mails by the end of the next working day after the e-mail is received.

5. Examinations
   a. The first two examinations will be in-class exams. The last two examinations (including the final examination) will be take-home exams. All exams will cover the lectures, homework assignments, and class discussions. Homework and class discussions will be emphasized on the examinations.
   b. The final examination will **NOT** be comprehensive.

6. Attendance

   Regular attendance and participation is expected. Students missing more than 6 class hours (2 classes) will have their final average reduced by 5 points.

7. Weekly agendas will be posted to the BAN 530 web site. **Check this site regularly-you are responsible for everything posted on this site.**

8. Disabled Student Policy: *It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.*

9. Religious Holiday Policy: *Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.*

   University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

COURSE GRADE:
The final grade is comprised of the following elements:
Four Exams @ 100 points each (Final is Exam 4)   400 points
Group Case Study   50 points

Total   450 points

Final grade calculation: 405 - 450 points = A
                                                  360 - 404 points = B
                                                  315 - 359 points = C
                                                  below 315 points = F

NOTE: Final grades will not be "curved."

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TENTATIVE SCHEDULE OF TOPICS

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We will cover the topics in the following order. Read ahead based on what was covered in the previous class and what is scheduled in the weekly agendas on the course web site.

Library Information; Introduction

BAN Role of Statistics in Business
Descriptive Statistics
Probability
Probability Distributions

Examination I (2/14/08)

BAN Estimation and Hypothesis Testing
Correlation and Simple Linear Regression (if time permits)

Examination II (3/6/08)

OM Global OM; Project Management; Forecasting; Design, Decision Theory; Quality; SPC; Process Strategy

Examination III

OM Capacity Planning; Location; Layout; Job Design; Work Measurement; Supply Chain Management; Inventory Management; Aggregate Planning; MRP & ERP; Scheduling; JIT; Maintenance & Reliability

Examination IV (Final) (5/15/08)

Important dates:
1/24/08	Deadline for E-mail to instructor.
2/7/08	Deadline for forming/joining a quality circle.
3/10-14	Spring Break
4/24/08	Case Study due date (tentative)
5/8/08	Last day for dropping Spring Semester courses without grade of F.