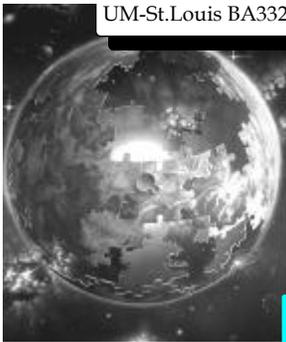


# BA 3320 - INTRODUCTION TO OPERATIONS MANAGEMENT



*Fall, 2006 Prerequisites: Econ. 1001, Stat. 3300, Acctg. 2410, computer skills equiv. to BA1800*  
 Text: Operations Management by Heizer/Render, recent (or flexible) Edn. POM for Windows CD,  
 Other course materials will be distributed on the web and on CD.

- 60% Two Exams. One **surface area** 8.5 X 11" two-sided page of notes, Collaboration prohibited
- 10% Original Research Report using LP or Simulation software -Individual effort-due last class
- 15% four Computer Exercises (Individual) Late Penalty, 10 points, 1 class deadline.
- 15% quizzes-- no makeups, lowest will be dropped

"When you try to pull just one thing out of the Universe, you find it attached to everything else."  
 --John Muir

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<u>Approx Week</u>	<u>Topics (tentative)</u>	<u>Chapter</u>
Week 1	Introduction & Overview of tools	
	<b><i>Making Quality Decisions</i></b>	
	Decision models: risk avoidance vs. risk management	module A, p.673
Week 2	Decision trees and value of information	Chapter 17
	Joint events-reliability and redundancy	Chapter 7S
Week 3	Cost Structures	(NIB)
	Spreadsheet Budgeting	Chapter 8
	"Location" Break even Analysis	
	Factor rating	
Week 4	Game theory, the cooperation dilemma	(NIB) , Video
	Statistical Process Control	Ch.6 S
	& Total Quality Management (TQM)	
	<b><i>Facilities /Capacity and Location Planning:</i></b>	
Week 5	Transportation Model Greedy solutions and opportunity cost	Module C
	<b><i>Optimization models</i></b>	<b><i>Handouts &amp; Videos</i></b>
Week 6	Linear Optimization Models	Module B
Week 7	Computer Solutions using Excel Solver	p.759 (6th)p. 724 (5th)

Exam #1 - Wednesday October 18

	<b><i>Microscheduling/ job sequencing:</i></b>	
Week 8	Job Matching -Assignment Method-Excel Solver	Chapter 15
Week 9	Process Priority Rules-Excel/ POM-Win	
Week 10	Queuing: Infinite Source	Module D
Week 11	Simulation modeling (EXTEND)	Course CD, Videos
	<b><i>Scheduling &amp; Inventory Management</i></b>	
Week 12	Aggregate Planning - forecasting & scheduling	Chapter 13
	EOQ Model & Quantity discounts	handouts, Chapter 12
Week 13-14	Service Level, Safety Stock & shortages; Reorder Point vs. Fixed Interval	
	Economic Run Size (ERS), Make vs. Buy & JIT Single Period, Just in Time Philosophy	
	<b><i>New Process Development and Efficiency</i></b>	
Week 15	Project management, CPM & PERT	Chapter 3
Week 16	Learning Curves	Module E, p 771
	Efficiency, Time & Motion Studies	Ch.10 scan

Labor Day  
 Holiday Mon.  
 Sept 4

EXC grades  
 available  
 until Last  
 drop Day  
 Mon. Nov 13

Section	time	Refno	Room	Exam2
001	MW 9:30-10:45	41634	SSB 216	Wed Dec 13 , 7:45-9:45 am
002	MW 11:00-12:15	41636	SSB 216	Mon Dec 11, 10:00-12:00noon
E01	MW 5:30-6:45	50720	SSB 216	Mon Dec 11, 5:30-7:30 pm
Online 003,C01,S01	MW 2:00-3:15	41638,53776,53780	SSB 205/TBA	Mon Dec 11, 12:30-2:30 pm

**Computer exercises:**

#1 budgets-	2.5%
#2 factor rating	2.5%
#3 EXCEL/POM WIN LP	10%
#4 simulation	watch video only
Original research LP or Monte Carlo Simulation	Last class 10%

**STUDENT DATA CARD:**

- Name (What you want to be called) Student Number
- Do you have access to a computer at home? level of Computer expertise?
- e-mail address
- Phone Numbers
- Major, year,completed BA3300 with C or better?
- Special interests, What do you hope to be able to do as a result of this course?

## A few administrative issues ("The Rules"):

### *Attendance at Classes:*

No grade will be assigned for attendance directly, but exams, quizzes and exercises do a pretty good job of weeding out people who aren't interested enough to come to class. My philosophy on exam questions is that if it is important enough to put on an exam, it's important enough to cover in class. The book is less focused and material in the book that isn't covered in class won't be on exams. Exams follow very much what is covered in class, and much of the material is either not treated in the book, or has a different approach. It is very difficult to get a passing grade in this course if you skip classes. There is no make-up tutoring for people who can't make it to class. If you miss a class, get notes from someone who takes good notes.

### *Exams*

cover books, lectures, supplemental readings, handouts and exercises. Exams are closed book but allow one sheet of notes. No make-up exams or switching sections without prior permission. A grade of zero will be assigned for exams missed without prior consent. You are expected to know definitions and terms. Study groups are beneficial.

### *Computer Exercises:*

For this to be a learning exercise, everyone must do their own assignments. Drop Dead dates for the assignments allow extra time for the myriad difficulties inherent in technological pursuits (i.e. %\$#@! computers), illness, and other delays. Plan to finish and turn in assignments before these "drop-dead" dates to avoid getting zeroes for late and missing assignments. Late assignments won't be accepted or will be discounted unless there is prior permission. **Submit assignments via one-page printouts and electronic copies in the mygateway dropbox (Both are required. Hardcopy is graded and must be submitted on time. Absence of dropbox copy may result in full denial of credit).**

Extra credit is sometimes awarded for doing something novel on one of the regular assignments. Extra credit isn't awarded to people who don't complete the basic assignments.

### *Working together*

can be very useful, but it is very important to actually do the exercises yourself and understand what's going on. Consult with others, but generate your own data and submit only your own work. Note that the exercises are designed to be personalized to some degree to encourage this. If assignments submitted are very similar in form and substance to someone else's then both parties will share a zero for the assignment. Exams and Computer exercises are designed and analyzed to detect copying and other cheating. See [collegecheating.com](http://collegecheating.com). Cheating on exams or assignments is not tolerated and will result in formal disciplinary action and possible expulsion from the University.

### *Reporting final grades:*

Grade breaks are at 90, 80, 70, and 60, with few pluses and minuses as I believe they penalize good students. Instead, I use the research reports to decide borderline cases. Exams and exercises aren't graded or returned unless you are registered in the course. Final grades are reported on line on time and accessible on the web. Please do not call me about your final grade. I will probably not be very accessible by phone in between sessions. If you want, or need, more detail, E-mail me so I can send you a copy and paste from my grade sheet. Email skills are a part of the computer course that is a prerequisite to this course.

Grades are not adjusted after the end of the semester by offering students opportunities to do "extra credit assignments" or redo work.

### *Excused grades*

are available until the last drop day. After that, the grade assigned reflects performance. Excused grades are not available to students caught cheating.

### *Delayed Grades*

On rare occasions, a delayed grade is assigned because an extraordinary circumstance prevents a student who is doing well from completing some requirement by the time grades are due. Example- someone delivers a baby on the day of the last exam and makes a reasonable judgement call to do it at the hospital instead of while taking the exam. Delayed grades are not an open opportunity to procrastinate on assignments, get more time to study for exams, or try again for free when things aren't going well.

### *Course Evaluation:*

This course is important to me, and I want to make it better. I learn a lot by teaching this course and from student suggestions. Written comments are much more useful than the summary statistics I get from filled in bubbles. The comments you write on the course evaluations don't get to me until months after grades are in and are anonymous, so you should feel comfortable to write what you think. I routinely share all these comments with my area coordinator ("boss") Dr. Robert Nauss. If you would rather make a comment to him directly, his E-mail address is [robert\\_nauss@umsl.edu](mailto:robert_nauss@umsl.edu)

### *Research Report:*

An opportunity to demonstrate application of the principles to real life problems. A few pages in length describing the problem /question, source of the data and discussion of the results—it needn't be a Master's thesis.

Required:

Application of LP (or other Solver) or Monte Carlo simulation tools from the course to a problem with real data (not from the book). Should be something reasonably novel. **Projects that are very similar to the exercises (such as simple queues or nutritional value of fast food) are likely to be awarded less credit. Due the last day of class. None are accepted late.**