

Dillard College of Business Administration

Syllabus: Operations Management.

MGMT 3453.

online.

Dillard Building

Summer 2020

Contact Information

Instructor: Dr. Mike Patterson, Professor of Management

Office: DB 203

Office hours: None

Office phone: (940) 397-4710

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Course Materials

Jacobs and Chase, Operations and Supply Management, 15th ed., McGraw-Hill,
ISBN: 9781259666100. Recommended.

Patterson, Management Science Programs for the IBM Personal Computer, 3rd ed., Kendall-
Hunt Publishing, ISBN: 0-7872-6792-9. Required

Course Description

Study of concepts, issues and techniques for systems of production. Development of a basic understanding of the manufacturing function in industry.

Course Prerequisites

Junior or Senior standing or consent of Department Chair

MATH 1203 or MATH 1233

Learning Goals

I. General Learning Goals:

- Students will practice problem solving and decision-making skills during in-class discussion. Assessment will occur on both homework assignments and course examinations.
- Demonstrate a broad understanding of the functional areas of a business entity.
- Develop analytical and critical thinking skills.

These general learning goals are among those established by the Dillard College of Business Administration. General learning goals represent the skills that graduates will carry with them into their careers. While assessing student performance in obtaining these general learning goals, the Dillard College is assessing its programs. The assessments assist us as we improve our curriculum and curriculum delivery.

II. Course Specific Learning Goals: Upon completion of the course students will have a basic knowledge of and understanding of the following components, concepts and applications.

A general understanding of the basic concepts, issues and techniques of production.
Understand the conceptual foundations of cost, volume, and profit analysis. Analysis from a capacity planning and supply-chain management perspective.
Analyze various goods and service sector issues as they relate to location analysis, facilities design, work measurement and logistics in various production environments including product, process and project layouts.
Explore the role of various operations research tools, such as linear programming, PERT, break-even analysis, transportation and inventory control models in the decision making process.
Analyze and compare the different prevailing operations theories, including lean manufacturing, just-in-time, total quality management and the theory of constraints.

Course Policies

If a student misses a regularly scheduled exam, the student must immediately notify the instructor of his/her intention to schedule a make-up exam. There is no other recourse available for a missed exam in the class. The exam dates are tentative and subject to change.

Grading and Evaluation:

Homework Problems - Each is a requirement of the class. You are required to complete 12 of the 17 assignments. Each homework assignment must be turned in on time. All homework is due in two weeks of the completion of lectures (one week for summer semester) related to the homework topics, with the exception of homework assigned at the end of the semester. Due dates for end-of-semester homework will be announced. A one-point deduction from the semester average will be calculated at the end of the semester for each missing or late homework assignment.

Grades will be determined on the basis of the total points earned on three 100-point exams, and the 100 point comprehensive final and any missing or late homework assignments. A calculator may be allowed for the exams and quizzes. The calculator must be a regular hand-held calculator. No other electronic devices are allowed.

Letter grades will be given according to the following scale:

- A 360-400 points
- B 320-359 points
- C 280-319 points
- D 240-279 points
- F below 240 points

The results of your exams and homework will be posted periodically on D2L.
Semester grades will be reported through normal University channels with no exceptions.

Course Content and Outline	Class Sessions(Hrs)	Text Chapters
1. Nature of Operations Management	2	1-2
A. Functions of Business		
B. Current Issues in Operations		
2. Cost Volume Profit Analysis	3	pp. 153-155
A. Fixed Cost		Appendix C
B. Variable Cost		
C. Revenue		
D. Break Even Analysis		
3. Capacity Planning	3	5
A. Concept of Capacity		
B. Manufacturing Environments		
C. Master Production Scheduling		
Exam # 1 (tentative date 06/09/2020)		

Course Content and Outline	Class Sessions(Hrs)	Text Chapters
4. Location of Facilities	3	15
A. Location Decision Making		
B. Location Factors		
C. Market and Material Considerations		
D. Break-Even Analysis		pp. 153-155
E. Transportation Problem		
F. Activity Based Costing		pp. 721-723
5. Facilities Design	2	8,9
A. Layout of Production Operations		
B. Product vs. Process Layout		
C. Advantages and Disadvantages of Layouts		
D. Continuous, Intermittent, Fixed Position		
7. Project Management	2	4
A. Concepts of Projects		
B. PERT and CPM		
8. Linear Programming	3	pp. 691-710
A. Graphic Approach		
B. Simplex Method		
C. Production Planning Problems		
D. Capacity Planning Problems		
Exam #2 (tentative date 06/17/2020)		
9. Production and Inventory Control	2	
A. Basic Principles and Concepts		
B. Production Scheduling		
C. Labor Scheduling		
D. Overall Scheduling		
E. Master Production Scheduling		

Course Content and Outline	Class Sessions(Hrs)	Text Chapters
10. Inventory Control/Order Point/Order Quantity	3	20
A. EOQ		
B. Quantity Discounts		
C. Investment Considerations		
D. Simulation of Inventory		
11. Material Requirements Planning	2	21
A. MRP I and MRPII		
B. Inventory Transactions		
C. Planning Systems		
Exam # 3 (tentative date 06/29/2020)		
12. Just-In-time	1	7,14
A. Planning under a JIT Environment		
B. Push vs. Pull Systems		
C. Management Philosophy		
13. Theory of Constraints	1	23
A. Introduction		
B. Concepts		
C. TOC vs. Cost Accounting		
14. Quality Movement	1	12
Total Quality Management		
Final Examination July 2, 2020		
These can also be found on D2L under homework		

HOMEWORK ASSIGNMENTS

Number	Assignment
1	Beta Manufacturing (Handout)
2	Problem 2 (Handout)
3	Clutch Engineering (Handout)
4	Location Problem 1 (Break-even) (Handout)
5	Location Problem 2 (Break-even) (Handout)
6	Problem 1 (Handout)
7	Problem 2 (Handout)
8	Page 366, Problem 8 Textbook
9	Pert Problem (Handout)
10	Page 734, Problem 4 Textbook
11	Page 733, Problem 3 Textbook
12	Billy Frank Haywood Problem (Handout)
13	EOQ Problem 1 (Handout)
14	EOQ Problem 2 (Handout)
15	Simulation Run 1 (Handout)
16	Simulation Run 2 (Handout)
17	Simulation Run 3 (Handout)

Academic Integrity:

With regard to academic honesty, students are referred to the "Student Honor Creed" of Midwestern State University Undergraduate Catalog.

Americans with Disabilities Act:

This class follows the guidelines suggested by Disabilities Support Services for those students who qualify for disability services. See Midwestern State University Undergraduate Catalogue, Services for Students with Disabilities.

Syllabus Change Policy:

This syllabus is a guide for the course and is subject to change.

Additional Information: Operations Homework Notes

Homework assignments for this class are located on the Dillard server drive Y. These files may be accessed on D2L and in the Dillard computer labs on the first and third floors (146, 306, 324 and 335)
Computer Icon
coursework(Y:)
Mike Patterson
homeworkdocuments
opshomeworkmaster.doc

Homework Documents

You are provided with a set of blank documents for homework.

If you lose your homework copies, these may be downloaded from the computer lab server on drive

Y:\coursework\MikePatterson\homeworkdocuments\opshomeworkmaster.doc

And also on D2L.

Homework assignments should be e-mailed to my graduate assistant at the following e-mail address: patterson.homework@msutexas.edu

Homework Check Figures	
1 Part I A	BE\$ = 90,000
2	
3 Part I	BE Units >21,000
3 Part II	BE Units > 24,000
4 Part I	IP >10,500 & <50,000
4 Part II	IP > 52,000 & < 150,000
5 Part	200 Best Outside
	300 Best Inside
5 Part II	IP between 200 & 300
6	Payoff 6350
7	Payoff 7851
8	Expected Completion = 26.83
9	Expected Completion = 39
10	Payoff .68
11	Payoff 2140
12	ROI = 416.875
13	ROI = 1.37 (137%)
14	Payoff .12 (12%)
15	Cumulative Cost between 75,000 & 85,000
16 & 17	Answers will vary

Software:
mgmtsci.exe recommended software for newer computers 32 and 64 bit operating system

sequence	file	video length mins	films
	syllabusops	35	
	mgmtscivideo	20	
1	introduction	112	
2	bep1	84	
3	bep2	125	
4	bep2homework	10	
5	capacity	152	
06/09/2020 8:00 a.m.	exam 1		
6	location	138	
7	globalsolutions	16	globalsolutions (approx 60 mins)
8	patternsoflayout	73	
9	ford(film)	3	100yearsHenryFordAssembly100seconds
10	workmeasurement	62	
11	pert	80	
12	linearprogrammingops	92	
06/17/2020 8:00 a.m.	exam 2		
13	productioninventorycontrol	97	
14	populations	8	
15	masterproductionscheduling	87	
16	eoqreorder	127	
17	MRP	65	
18	thegoal	10	TheGoal (approx 55 mins)
06/29/2020 8:00 a.m.	exam 3		
19	JustinTime	16	pushorpull (approx (25 mins)
20	drdeming14points	5	deming (approx 60 mins)
			JimSinegalCostco (approx 7 mins)
07/02/2020 8:00 a.m.	final exam		

Management Science Programs for the IBM Personal Computer

Found in Dillard Computer Labs –Y drive, Mike Patterson

mgmtsci.exe

Can be purchased from Midwestern Book Store or on-line from

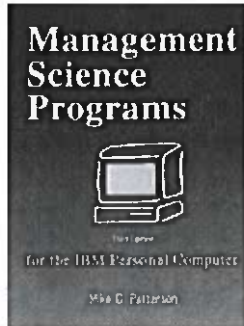


Figure 1

<https://he.kendallhunt.com/product/management-science-programs-ibm-personal-computer>

How to hide unhide files

<https://www.technipages.com/show-hidden-files-windows>