

# Dillard College of Business Administration

Syllabus: Operations Management.  
MGMT 3453.

Dillard Building  
Spring

## Contact Information

Instructor: Dr. Mike Patterson, Professor of Management  
Office: DB 203  
Office hours: TTh 11:00 a.m- 1230 p.m., W 9-11:00 a.m.  
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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**

**Attendance Policy:** Regular attendance is expected. See the university catalog for the University Class Attendance Policy. Each meeting of the class will run as scheduled. So as not to disturb the class, you are not to walk in and out of the classroom during the class hour except for an emergency. As a courtesy to all concerned, please silence all pagers and telephones when entering the classroom.

Students are required to attend every scheduled class session. Each unexcused absence which exceeds six (four in summer school) will result in a two point deduction in the end of semester average grade. Unexcused absences are defined as follows:

1. A student fails to attend class and has no approved documentation for the absence.
2. A student arrives after the class roll is taken, which will generally be recorded no earlier than 10 minutes after the scheduled start time for the class.
3. A student leaves the class room before the class session is dismissed.

Excused absences for university related activities, medical reasons, and traffic related incidents must be supported by appropriate documentation.

No electronic devices are allowed in the class. This includes computers, phones, headphones etc. If such devices are observed during class, student will be ask to leave the classroom which will be recorded as an unexcused absence.

#### Other Related 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 four 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 or the desktop calculator for on-line exams.

Letter grades will be given according to the following scale:

- A 450-500 points
- B 400-449 points
- C 350-399 points
- D 300-349 points
- F below 300 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	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		
<b>Exam # 1 (tentative date 02/01/2022)</b>		
3. Capacity Planning	3	5
A. Concept of Capacity		
B. Manufacturing Environments		
C. Master Production Scheduling		
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		
<b>Exam #2 (tentative date 02/24/2022)</b>		
6. Work Measurement		
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		

Course Content and Outline	Class Sessions(Hrs.)	Text Chapters
C. Production Planning Problems		
D. Capacity Planning Problems		
<b>9. Production and Inventory Control</b>	<b>2</b>	
A. Basic Principles and Concepts		
B. Production Scheduling		
C. Labor Scheduling		
D. Overall Scheduling		
<b>Exam #3 (tentative date 03/29/2022)</b>		
<b>10 Master Production Scheduling</b>		
<b>11. Inventory Control/Order Point/Order Quantity</b>	<b>3</b>	<b>20</b>
A. EOQ		
B. Quantity Discounts		
C. Investment Considerations		
D. Simulation of Inventory		
<b>12. Material Requirements Planning</b>	<b>2</b>	<b>21</b>
A. MRP I and MRPII		
B. Inventory Transactions		
C. Planning Systems		
<b>Exam # 4 (tentative date 04/21/2022)</b>		
<b>13. Just-In-time</b>	<b>1</b>	<b>7,14</b>
A. Planning under a JIT Environment		
B. Push vs. Pull Systems		
C. Management Philosophy		
<b>14. Quality Movement</b>	<b>1</b>	<b>12</b>
Total Quality Management		
<b>Final Examination 04/30/2022</b>		

## 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](mailto:patterson.homework@msutexas.edu)

Homework Check Figures	
1 Part I A	BE\$ = 90,000
2	Contribution = .70 BE \$ = 60,000
3 Part I	BE Units >21,000 & <22,000
3 Part II	BE Units > 24,000 & <25,000
4 Part I	IP >30,000 & <35,000
4 Part II	IP > 130,000 & < 140,000
5 Part	200 Best Outside City
	300 Best Inside City
5 Part II	IP between 200 & 300
6	Payoff 6,350
7	Payoff 7,851
8	Expected Completion = 26.83
9	Expected Completion = 39
10	Payoff .68 B 1.846 A .538
11	Payoff 2140
12	Payoff = 416.875
13	ROI = 1.38 (138%)
14	Payoff .124 (12.4%)
15	Cumulative Cost between 75,000 & 85,000
16 & 17	Answers will vary should go down & then up

**Software:**

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

Spring	Operations Management	films	homework
Week 1	Syllabus ops		
1	introduction		
1,2	introduction (cont)		
2	Break-even analysis		
3	Break-even analysis (cont)		problems 1-3
3	Break-even analysis homework		
<b>Week 4</b>	<b>Exam 1 02/01/22</b>		
4,5	capacity		
5.6	location		
6	Global solutions	Global solutions	problems 4-7
7	Patterns of layout		
<b>Week 7</b>	<b>Exam 2 02/24/22</b>		
8	ford(film)	100yearsHenryFordAssembly100seconds	
8	Work Measurement		
8	pert		
9	Linear programming		problems 8-9
10	Production inventory control		problems 10-12
10	populations		
<b>Week 11</b>	<b>exam 3 03/29/22</b>		
11,12	MPS		
12,13	EOQ reorder		
13	MRP		problems 13-14
13	The Goal	The Goal	problems 14-17
<b>Week 14</b>	<b>exam 4 04/21/22</b>		
15	Just in Time	Push or Pull	
15	drdeming14points	Deming	
15	JimSinegal	Jim Sinegal Costco	
	<b>final exam Tentative 04/30/22 8:00 a.m.</b>		



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

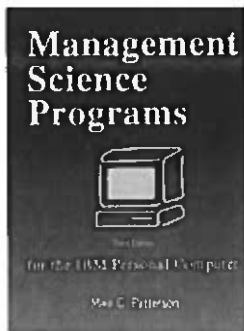


FIGURE 1

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

How to hide unhide files

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

Campus Carry Statement:

Senate Bill 11 Handgun Policy -Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from licensed concealed carry are appropriately marked, in accordance with state law (Penal Code 30.06 signage). Please note, open carry of handguns, whether licensed or not, and the carrying of all other firearms (rifles, shotguns, etc.), whether open or concealed, are prohibited on campus. For more information regarding campus carry, please refer to the University's webpage at: Campus Carry.

