

INTER AMERICAN UNIVERSITY OF PUERTO RICO  
METROPOLITAN CAMPUS  
BUSINESS FACULTY  
GRADUATE PROGRAM

**COURSE SYLLABUS**

**I. GENERAL INFORMATION**

COURSE TITLE	:	Introduction to Industrial Management
CODE AND NUMBER	:	BADM-6100
CREDITS	:	Three (3)
ACADEMIC TERM	:	
PROFESSOR	:	
OFFICE HOURS	:	
OFFICE TELEPHONE	:	
ELECTRONIC MAIL	:	

**II. DESCRIPTION**

Analysis of the principles of operations management. Emphasis on the functions of the operations manager in the administration of a global industrial company. Examination of the productive use of the factors of production and management of production and operations as a strategy for innovation and competitiveness of the industrial enterprises in a global environment. Study of new trends in the discipline.

**III. OBJECTIVES**

ITS IS EXPECTED THAT UPON COMPLETING THE COURSE, THE STUDENT SHOULD BE ABLE TO:

1. Students should have a basic understanding of quantitative methods, managerial statistics, business management and organizational theory.
2. Put operations management system in perspective by recognizing the inputs, transformation process, desired outputs and feedback loop of a system.
3. Know the differences between strategic decisions, design decisions and operational decisions.
4. Know how management of operations can effectively contribute to productivity improvement and to understand the importance of value driven management.
5. Know various functional areas of an organization and their critical integrated role in the performance of the organization.
6. Know the differences between manufacturing and service organizations and the differences between designing production and service systems.
7. Know the concept of competitive priorities and the need to control operational costs as a way for the business organization to compete.

8. Know the differences between various production systems in terms of production volume and customization.
9. Know the basic concepts of Scheduling and Human Resources elements related to POM.
10. Know the important role of manufacturing, service, and information technologies in competitive position of the organizations.
11. An understanding of the basic analytical principles used in production and operations management.

#### **IV. CONTENT**

1. INTRODUCTION TO OPERATIONS AND COMPETITIVENESS
  - A) What is Operation Management?
  - B) Differences between Manufacturing and Service Organizations
  - C) Historical Development
  - D) OM Decisions
  - E) Today's OM environment
  - F) OM in practice
2. OPERATIONS STRATEGY AND COMPETITIVENESS
  - A) Role of Operation Strategy
  - B) Developing Business Strategy
  - C) Developing Operations Strategy
  - D) Productivity
  - E) Operations Strategy across the Organization
  - F) The link to Supply Chain
3. FORECASTING
  - A) Principles of Forecasting
  - B) Steps in the Forecasting Process
  - C) Types of Forecasting Methods
    - a) Qualitative
    - b) Quantitative
  - D) Time Series Models
    - a) Forecasting Level or Horizontal Pattern
    - b) Forecasting Trend
    - c) Forecasting Seasonality
  - E) Causal Models
    - a) Linear Regression
    - b) Correlation Coefficient
  - F) Forecasting Accuracy
    - a) MAD / MSE / MAPE
    - b) Tracking Signal
  - G) Case Study in Forecasting
4. PRODUCT DESIGN AND PROCESS SELECTION
  - A) Product Design Process
  - B) Factors Impacting Product Design
  - C) Process Selection

- D) Designing Processes
- E) Process Performance Metrics
- F) Linking Product Design to Process Selection
- G) Technology and Product Design and Process Selection
- H) Designing Services
- I) The Supply Chain Link
- 5. TOTAL QUALITY MANAGEMENT
  - A) Defining Quality
  - B) Cost of Quality
  - C) TQM Philosophy
  - D) The Quality Award Standard
  - E) QC and Supply Chain Management the Link with Suppliers
  - F) Trends in Quality Control across the organization
- 6. CAPACITY PLANNING
  - A) Measuring Capacity
  - B) Capacity Considerations
  - C) Making Capacity Planning Decisions
  - D) Decision Trees
  - E) Location Analysis
  - F) Making Location Decision
  - G) The Supply Chain Link
- 7. FACILITY LOCATION
  - A) Location Analysis
  - B) Location Decisions
- 8. FACILITY LAYOUT
  - A) Types of Layouts
  - B) Designing Process Layouts
  - C) Warehouse Layouts
  - D) Office Layouts
  - E) Designing Product Layouts

## **V. LEARNING ACTIVITIES**

- A.** Lectures
- B.** Case Studies
- C.** Supplementary readings
- D.** Internet searches
- E.** Audiovisual Support: PowerPoint presentations, videos
- F.** Presentation and discussion of relevant academic journal or trade journal articles

## **VI. EVALUATION**

Required activities to achieve course objective should include various pedagogical activities such as, homework, presentations, short quizzes, partial examinations and interactive participation. It is highly recommended the utilization of the Blackboard platform as a support system for the course. Assessment techniques should be applied at professor discretion.

Recommended Evaluation:

2 Partial Examinations	(40%)
Homework	(35%)
Case studies	(15%)
<u>Attendance &amp; Participation</u>	<u>(10%)</u>
Total	(100%)

## **VII. SPECIAL NOTES**

### **Auxiliary services or special needs**

All students who require auxiliary services or special assistance must request them at the beginning of the course or as soon as they become aware that they need them, through the corresponding registry, in the Office of the Coordinator of services for students with disabilities, Dr. María de los Ángeles Cabello. She is located in the Counseling and Counseling Program, office 111, on the first floor of the John Will Harris building, extension 2306

### **Honesty, fraud, and plagiarism**

Dishonesty, fraud, plagiarism and any other inappropriate behavior in relation to academic work constitutes major infractions sanctioned by the General Student Regulations. The major infractions, as stated in the General Student Regulations, may have as a consequence, suspension from the University for a definite period greater than one year or the permanent expulsion from the University, among other sanctions.

### **Use of electronic devices**

Cellular telephones and any other electronic device that could interrupt the teaching and learning processes or alter the environment leading to academic excellence will be deactivated. Any urgent situation will be dealt with, as appropriate. The handling of electronic devices that allow students to access, store or send data during evaluations or examinations is prohibited

### **Compliance with the Provisions of Title IX**

The Federal Higher Education Act, as amended, prohibits discrimination because of sex in any academic, educational, extracurricular, and athletic activity or in any other program or function, sponsored or controlled by a higher education institution, whether or not it is conducted within or outside the property of the institution, if the institution receives federal funds.

In harmony with the current federal regulation, in our academic unit an Assistant Coordinator of Title IX has been designated to offer assistance and orientation in relation to any alleged incident constituting discrimination because of sex or gender, sexual harassment or sexual aggression. The Assistant Coordinator Sr. George Rivera can be reached by phone at extension 2262 o 2147, or by e-mail [griverar@metro.inter.edu](mailto:griverar@metro.inter.edu).

The Normative Document titled **Norms and Procedures to Deal with Alleged Violations of the Provisions of Title IX** is the document that contains the institutional rules to direct any complaint that appears to be this type of allegation. This document is available in the Web site of Inter American University of Puerto Rico ([www.inter.edu](http://www.inter.edu)).

## VIII. EDUCATIONAL RESOURCES

### a) Required Textbook

Reid, R. DAN & SANDERS, NADA R. (2019). *Operations Management an Integrated Approach*. (7<sup>th</sup>. Ed.) New York: John Wiley and Sons.

### b) Audiovisual and Information Technology

Campus On-line Services at - <http://cai.inter.edu/>

- **Databases such as ProQuest, Infotrac, EBSCO, Emerald**
  - Business and Company Resource Center
  - General Business File Internacional
  - Expanded Academic ASAP

## IX. BIBLIOGRAPHY

Black, Ken (2014). *Business Statistics: For Contemporary Decision Making* (8th Ed.) New York: John Wiley and Sons.

Bozarth, Cecil C. & Handfield, Robert B. (2013). *Introduction to Operations and Supply Chain Management* (3<sup>rd</sup>. Ed) Boston, Prentice Hall.

Heizer, J & Render, B. (2014). *Operations Management* (11<sup>th</sup> Ed.) Boston: Prentice Hall.

Jacobs, F.R. & Chase, R. (2014). *Operations and Supply Chain Management*. (14<sup>th</sup>. Ed.) New York: McGraw Hill.

Organizations:

- 1) American Society of Quality <http://asq.org/index.aspx>

- 2) APICS The Association for Operations Management. [www.APICS.org](http://www.APICS.org).
- 3) Production and Operations Management Society. [www.poms.org](http://www.poms.org).

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