ISM UNIVERSITY OF MANAGEMENT AND ECONOMICS

APPROVED BY
THE STUDY COMMISSION
Minutes No. 02-12-2026-02
as of 15th January 2026

OPERATIONS MANAGEMENT

Course code	*MNG152*
Course title	*Operations Management*
Type of course	*Main*
Stage of study	*Undergraduate*
Year of study	*Third*
Semester	*Spring*
ECTS	*6 ECTS: 24 hrs. of lectures, 24 hrs. of workshops; 112 hrs. of individual study; 2 consultation hours; 2 exam hours*
Lecturer	*Alvydas Vitkauskas*
Study form	*Full-time*
Course prerequisites	-
Language of instruction	*English*

THE AIM OF THE COURSE

The aim of this course is to familiarise students with the principal operational issues that managers confront, and provide students with language, concepts, and tools to deal with these issues in order to gain competitive advantage through operations. Also, this course aims to develop skills for modelling and analysis for performance improvement of business processes.

This course provides a general introduction to operations management, which is the management of the recurring activities of a firm. Together with finance and marketing, operations is one of the three primary functions of any firm. Students are familiarised with conceptual analyses of business processes and methods for improvement in all major areas of operations, starting with operations planning, implementation, and control, and ending with operational improvements.

Course learning outcomes

Course level learning outcomes (objectives)	Degree level learning objectives (Number of LO)	Learning methods	Assessment methods
CLO1. Ability to operate the main concepts, laws, and techniques of business process management	BLO 1.1 BLO 1.2	Lectures, tutorials, exercises, examples, homework assignments	Homework presentations, final examination, retake
CLO2. Ability to apply these concepts, laws and techniques in business process modelling	BLO 1.1, BLO 1.2	Lectures, tutorials, exercises, examples, homework assignments	Homework presentations, final examination, retake
CLO3 Ability to analyse the process models, and control process drivers to improve performance of any business process	BLO 3.1, BLO 3.2	Lectures, tutorials, exercises, examples, homework assignments	Homework presentations, final examination, retake
CLO4 Ability to see an organization as a system of interrelated processes	BLO 1.1, BLO 4.1, BLO 4.3	Lectures, tutorials, exercises, examples, homework assignments	Homework presentations, final examination, retake

ACADEMIC HONESTY AND INTEGRITY

The ISM University of Management and Economics Code of Ethics, including cheating and plagiarism are fully applicable and will be strictly enforced in the course. Academic dishonesty, and cheating can and will lead to a report to the ISM Committee of Ethics. With regard to remote learning, ISM remind students that they are expected to adhere and maintain the same academic honesty and integrity that they would in a classroom setting.

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COURSE OUTLINE

Topics (Chapters in R. Anupindi, S. Chopra et al.)	Lecture hours	Workshop hours	Readings & Exercises
Operations Strategy and Management. Strategic positioning and operational effectiveness. The Strategy Hierarchy. Strategic Fit. Focused Operations. Matching Products and Processes. The Operations Frontier and Trade-Offs. The Evolution of Strategy and Operations Management.	2	2	Ch.1
Products, Processes, and Performance. The Process View of Organizations. Performance Measures. Product Attributes. Process Competencies. Enabling Process Success. Process Architectures.	2	2	Ch. 2
Process Flow Measures. The Essence of Process Flow. Key Process Measures. Flow Time, Flow Rate, and Inventory Dynamics. Throughput in a Stable Process. Little's Law. Financial Flows though Financial Statements. Turnover Ratio. Valuing an Improvement.	2	2	Ch. 3
Flow-Time Analysis. Flow-Time Measurement. The Process Flowchart. Flow Time and Critical Paths. Theoretical Flow Time and the Role of Waiting. Levers for Managing Theoretical Flow Time.	2	2	Ch. 4
Flow Rate and Capacity Analysis. Flow Rate Measurements. Resources and Effective Capacity. Effect of Product Mix. Capacity Waste and Theoretical Capacity. Levers for Managing Throughput.	2	2	Ch. 5
Mid-Term Exam			Ch. 1-5
Inventory Analysis. Inventory Classification. Inventory Benefits. Inventory Costs. Inventory Dynamics of Batch Purchasing. Economies of Scale and Optimal Cycle Inventory. Effect of Lead Times on Ordering Decisions. Periodic Ordering.	2	2	Ch. 6
Managing Flow Variability: Safety Inventory. Demand Forecasts and Forecast Errors. Safety Inventory and Service Level. Optimal Service Level. Leadtime Demand Variability. Pooling Efficiency through Aggregation. Shortening the Forecast Horizon through Postponement. Periodic Review Policy.	4	4	Ch. 7
Managing Flow Variability: Safety Capacity. Service Process and Its Performance. Effect of Variability on Process Performance. Drivers of Process Performance. Process Capacity Decisions. Buffer Capacity, Blocking, and Abandonment. Performance Variability and Promise. Customer Pooling and Segregation. Managing Customer Expectations.	4	4	Ch. 8
Managing Flow Variability: Process Control and Capacity. Performance Variability. Analysis of Variability. Process Control. Process Capability and its Improvement. Product and Process Design.	2	2	Ch. 9
Lean Operations: Process Synchronization and Improvement. Processing Networks. Synchronization and Efficiency. Waste and Its Sources. Improving Flow in a Plant. Improving Flows in Supply Chain. The Improvement Process.	2	2	Ch. 10
TOTAL	24	24	
Consultations	2		
Final Exam	2		Ch. 6-10

FINAL GRADE COMPOSITION

Type of assignment	**%**
Group Components - 20%	
Homework assignments (2 assignments and 1 topic summary presentation)	20
Individual Components - 80%	
Mid-Term Exam	30
Final Exam	50
Total	**100**

DESCRIPTION AND GRADING CRITERIA OF EACH ASSIGNMENT

1. Homework assignments will be uploaded to the e-learning system after the lecture. The homework assignment must be prepared before the next defence according to the timetable (in one or two weeks) and uploaded to the e-learning system a day before the workshop. For the homework to be graded, it is necessary: 1) to upload it to the e-learning system, 2) to take part in the corresponding workshop, and 3) to answer questions, if invited. Bonus point (up to 10% of the final mark) can be added for the active participation (questions, comments, discussions) in the workshops.
2. Mid-Term and Final Exams are closed-book, one page open-notes exams. Mid-Term exam covers chapters 1-5. Final exam covers chapters 6-10. Stand-alone calculators and dictionaries are welcome.
3. The Retake Exam will cover all chapters in the course and will replace the midterm and final exam marks. It will account for 80% of the overall marks for the course.

TEXTBOOK

1. Ravi Anupindi, Sunil Chopra et al. Managing Business Process Flows. Pearson Prentice Hall, Upper Saddle River. 2006 (or later edition).

Additional Recommended Readings

1. The Goal: A Process of Ongoing Improvement, by Eliyahu M. Goldratt.
2. The Theory of Constraints (TOC), by Eliyahu M. Goldratt.
3. The Six Sigma Way: How to Maximize the Impact of Your Change and Improvement Efforts, by Peter Pande, Robert Neuman, and Roland Cavanagh.
4. Reengineering the Corporation: A Manifesto for Business Revolution, by Michael Hammer and James Champy.
5. Competing Against Time: How Time-Based Competition is Reshaping Global Markets, by George Stalk, Jr., and Thomas M. Hout.
6. Execution: The Discipline of Getting Things Done, by Larry Bossidy and Ram Charan.

ANNEX

DEGREE LEVEL LEARNING OBJECTIVES

Learning objectives for the Bachelor of Business Management

Programmes: International Business and Communication, Business Management and Marketing, Finance, Industrial Technology Management, Entrepreneurship and Innovation

Learning Goals	Learning Objectives
Students will be critical thinkers	BLO1.1. Students will be able to understand core concepts and methods in the business disciplines
	BLO1.2. Students will be able to conduct a contextual analysis to identify a problem associated with their discipline, to generate managerial options and propose viable solutions
Students will be socially responsible in their related discipline	BLO2.1. Students will be knowledgeable about ethics and social responsibility
Students will be technology agile	BLO3.1. Students will demonstrate proficiency in common business software packages
	BLO3.2. Students will be able to make decisions using appropriate IT tools
Students will be effective communicators	BLO4.1. Students will be able to communicate reasonably in different settings according to target audience tasks and situations
	BLO4.2. Students will be able to convey their ideas effectively through an oral presentation
	BLO4.3. Students will be able to convey their ideas effectively in a written paper

BLO

Learning objectives for the Bachelor of Social Science

Programmes: Economics and Data Analytics, Economics and Politics

Learning Goals	Learning Objectives
Students will be critical thinkers	ELO1.1. Students will be able to understand core concepts and methods in the key economics disciplines
	ELO1.2. Students will be able to identify underlying assumptions and logical consistency of causal statements
Students will have skills to employ economic thought for the common good	ELO2.1. Students will have a keen sense of ethical criteria for practical problem-solving
Students will be technology agile	ELO3.1. Students will demonstrate proficiency in common business software packages
	ELO3.2. Students will be able to make decisions using appropriate IT tools
Students will be effective communicators	ELO4.1. Students will be able to communicate reasonably in different settings according to target audience tasks and situations
	ELO4.2. Students will be able to convey their ideas effectively through an oral presentation
	ELO4.3. Students will be able to convey their ideas effectively in a written paper