



University of Management and Technology

COURSE OUTLINE: TECHNOLOGY & OPERATIONS MANAGEMENT - OS 565

Resource Person:	Kamran Rashid
Email:	kamranrashid@umt.edu.pk
Contact Hours:	
Office Address:	Room 3N-02, North Block, Main Building Extension: 3347
Programme:	MBA
Section:	G
Semester:	Fall 2022
Course Pre-requisites:	Data Modeling & Decisions
Credit Hours:	3
Course Type:	Core
Venue/Day/Time:	MC-02 / Wednesday 6:30 PM – 09:15 PM
Course URL (if any):	https://lms.umt.edu.pk/course/view.php?id=1530-

Course Description:
<p>The global business system is changing the way everyone communicates, lives, and works. The pace of technological change is quickening as computers and communication networks make it possible for firms to react faster to innovations and shifts in demand. The new global information links connect customers, retailers, and manufacturers with a touch of button. The use of technology in this new information age has collapsed the traditional barriers that once existed. Companies now make worldwide products.</p> <p>These changes have a tremendous impact on the production operations of companies. Effective management of these operations through use of technology has become an area of growing concern. Continuous improvement of products, services and processes, and elimination of all forms of waste, have become inevitable for companies who aim to remain competitive in the global market.</p> <p>Technology & Operations Management (TOM) is a discipline that studies and practices the process of planning, designing, and operating production systems and subsystems, in both manufacturing and services, to achieve the goals of the organization. In the context of businesses, TOM ensures that the business remains economically as well as environmentally and socially sustainable.</p>

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Course Teaching Methodology:

- Interactive class discussions
- Case studies
- Presentations
- Business Simulation Games
- Role Playing
- Guest Speaker sessions
- Video cases
- Skill Development Exercises

MBA Mission

‘Our mission is to transform students into visionary leaders, managers, and entrepreneurs who are sensitive to corporate social responsibility, business ethics, and global sustainability challenges.’

Program Objectives/Goals		Program Learning Outcomes
PO1	To inculcate reasoning, critical, analytical, problem-solving, and decision-making skills.	PLO1, PLO3, PLO5
PO2	To provide real-life work experiences.	PLO2, PLO4, PLO5, CLO7
PO3	To provide opportunities to network with employers and entrepreneurs.	PLO4, PLO7
PO4	To develop future leaders, managers, and entrepreneurs for the digital and globalized world.	PLO1, PLO2, PLO6,
PO5	To develop effective presentation, oral, and written communication skills.	PLO2, PLO4, PLO6
PO6	To expose students to the important social, environmental, economic and ethical issues.	PLO1, PLO3

Program Learning Outcomes (PLOs): MBA

After completing this degree program, students shall be able to:

PLO1	Critically analyze complex business situations and make appropriate decisions.
PLO2	Successfully negotiate with the challenging work demands.
PLO3	Apply organizational theories, models, and frameworks to the real-world business situations to solve managerial issues.
PLO4	Communicate effectively and efficiently, and deliver professional business presentations.
PLO5	Analyze and evaluate market opportunities and develop viable business plans.
PLO6	Use digital technologies and data analytics tools to make informed decisions.
PLO7	Undertake industry-based projects through interaction with business leaders and entrepreneurs.

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Course Learning Outcomes (CLOs): After completing this course, students shall be able to:		
		Mapping the CLOs with PLOs
CLO-1	Gain an appreciation for the complexities of managing local and global operations and understanding their contribution to strategy and firm performance	PLO-1,4
CLO-2	Apply state-of-the-art tools and techniques for effective operations management	PLO-3,6
CLO-3	Evaluate how the information technology is fundamentally changing the nature of operations management at both strategic and tactical levels	PLO-6
CLO-4	Understand the issues of environmental and social sustainability of business operations	PLO-2,5
CLO-5	Identify and resolve ethical issues in operations management	PLO-5

Assurance of Learning and Assessment Items: <i>Specify Assessment Items that will ensure student learning through application and achieve objectives of specific PLOs/COs/CLOs</i>	
Assessment Item	Application/ Objectives PLO/CO/CLO
Class Participation	CLO 1,2,3,4,5
Presentations	CLO 1
Quiz	CLO 2,3
Assignments	CLO 2,3,5
Written Analysis of the Case (WAC)	CLO 1,2,4,5
Project	CLO 1,2,3,4,5
Short Tests	CLO 1,2,3,4,5

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Assessment Structure and Grading Policy

Assessment Item	Weight (%)	Execution Plan
Class Participation	10	Students marked based on their contribution to class learning
Presentations	10	Students make formal presentations on assigned topics
Quiz	10	Open Book / Open Notes
Assignments	10	Weekly tasks
Written Analysis of the Case (WAC)	10	Take-home (Group) Assignment
Project	10	Students apply their learning on a hands-on experience of managing operations
Short Tests (2)	40	Open Book / Open Notes
Total =	100	

Notes – Norms and Important Class Policies:

Class Policy:

You are required to be in class at the assigned time. If you arrive more than ten minutes late, you will be marked absent.

Mobile Policy:

Switch off your mobile phones while in class.

Email Policy:

You will be responsible if you miss a deadline because you did not read your email. Participants should regularly check their University email account.

Class Attendance Policy:

A minimum 80% attendance is required for a participant to be eligible to sit in the final examination. Reporting sick and attending family functions (such as a wedding) will be considered as absent. Participants with less than 80% attendance in a course will be given grade 'F' (Fail) and will not be allowed to take the final exam. An 'F' grade will negatively impact student's CGPA.

Withdrawal Policy:

Students may withdraw from a course till the end of the 12th week of the semester. In such a case, a grade 'W' will be awarded. A 'W' grade will not impact student's CGPA. A student withdrawing after the 12th week will be awarded 'F' grade, which will negatively impact CGPA.

Harassment Policy:

Sexual or any other form of harassment through physical, verbal or electronic (mobile, email, etc.) means is constituted as punishable offence. Such actions will not be tolerated.

Use of Unfair Means/Honesty Policy:

Any participant found using unfair means or assisting another participant during a class test, quiz, assignment, examination, etc. will be liable for strict disciplinary action.

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Plagiarism Policy:

Plagiarism is defined as the practice of taking someone else's work or ideas and passing them off as one's own. The participants will submit the plagiarism report to the resource person with every assignment, report, project, thesis, etc. A participant who fails to submit the 'Turnitin' report will receive 'F' grade that will count towards CGPA. If participants attempt to cheat 'Turnitin,' they will receive an additional 'F' that will count towards their CGPA. Look up the Student Handbook for further information on rules and regulations regarding plagiarism while submitting final report and other documents.

NOTE: **STUDENTS ARE REQUIRED TO READ AND UNDERSTAND ALL ITEMS OUTLINED IN THE STUDENT HANDBOOK.**

Weekly Sessions Plan:

<u>Week</u>	<u>Topics / Contents</u>	<u>Activity</u>	<u>Relevant CLO</u>
1.	<ul style="list-style-type: none"> • COURSE OVERVIEW • INTRODUCTION TO OPERATIONS MANAGEMENT 	Interactive Class Discussion	CLO-1,2
2.	<p>HISTORY OF OM</p> <p>PRODUCTIVITY</p>	Interactive Class Discussion Hands-on Exercises Role Play	CLO-1,2,4,5
3.	<p>OPERATIONS STRATEGY IN GLOBAL ENVIRONMENT</p> <p>DESIGN OF GOODS & SERVICES</p>	Interactive Class Discussion Presentation	CLO-1,2
4.	PROCESS STRATEGY	Interactive Class Discussion Case Study Presentation	CLO-1,4,5
5.	<p>MAKE vs BUY DECISION</p> <p>BREAK-EVEN ANALYSIS</p>	Interactive Class Discussion Hands-on Exercises Presentation	CLO-1,4,5
6.	<p>PROCESS ANALYSIS</p> <p>BOTTLENECK</p>	Interactive Class Discussion BUSINESS SIMULATION GAME	CLO-1
7.	CAPACITY PLANNING	Interactive Class Discussion Presentation Hands-on Exercises	CLO-2

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8.	SHORT TEST-1		
9.	LOCATION STRATEGIES	Interactive Class Discussion Hands-on Exercises	CLO-3
10.	LAYOUT STRATEGIES	Interactive Class Discussion Case Study Hands-on Exercises	CLO-3
11.	LAYOUT STRATEGIES	Interactive Class Discussion Hands-on Exercises	CLO-3
12.	ASSEMBLY LINE BALANCING	Interactive Class Discussion Case Study Hands-on Exercises	CLO-2,5
13.	INVENTORY MANAGEMENT	Interactive Class Discussion Case Study Hands-on Exercises	CLO-2,5
14.	AGGREGATE PLANNING	Interactive Class Discussion Case Study	CLO-4
15.	SHORT TEST-2		

Primary Text Book (s):

Operations Management by Jay Heizer and Barry Render, 12th Edition

Reference / Supplementary Reading(s):

- *Operations Management for Competitive Advantage* by Chase, Aquilano, Nicholas, and Jacobs
- *Operations Management* by Krajewski and Ritzman
- *Operations Management* by Stevenson

Useful Online / Web Resources:

<https://www.ascm.org/>
https://www.coursera.org/articles/operations-management?trk_ref=xdp_article_onsite_recs&utm_source=gg&utm_medium=sem&utm_campaign=B2C_INDIA_branded_FTcof_courseraplus_arte_PMax&utm_content=Degree&campaignid=19607944793&adgroupid=&device=c&keyword=&matchtype=&network=x&devicemodel=&adpostion=&creativeid=&hide_mobile_promo&gclid=CjwKCAjwpayjBhAnEiwA-7ena71UvZCeMEyjAJAF3YsXxIQIK_Zf1RXHLx-Hf9UTJ5C_hRjNIWn9hhoC0-0QAvD_BwE
<https://ocw.mit.edu/courses/15-760a-operations-management-spring-2002/>