

Course Title	Operations and Management Science				
Course Code	MGT325				
Course Type	Elective				
Level	Bachelor (1 st Cycle)				
Year / Semester	3 rd year /6 th semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hours / 14weeks	Laboratories / week	None
Course Purpose and Objectives	<p>The objective of the course is to give a general understanding to students about the issues included in production and operations management including design, operation and control of industrial and service enterprises.</p> <p>Students shall be exposed to quantitative techniques including, decision theory, linear programming, and forecasting.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> • Through business cases and project work apply the process of operations planning and be able to link operations strategy with corporate strategy • Discuss the various process characteristics and apply them in the support of operations strategy through business cases and project work • Explain the concept of capacity and layout management and apply capacity and layout techniques in business examples • Through data sets apply forecasting techniques (Time Series, regression analysis etc.) in Business forecasting • Through business cases use and apply decision theory concepts including break even analysis and decision trees in managerial decision making • Apply Total Quality Management concepts and quality Management tools and techniques through cases and • Apply Linear Programming principles and queuing theory in analyzing and optimizing processes in business examples 				

	<ul style="list-style-type: none"> • Make use of network models in project management in business cases. 		
Prerequisites	Junior Standing	Co-requisites	None
Course Content	<p>Operation Management: Definition; History of Operation Management; the Operations Function; Operations Decisions.</p> <p>Process Selection: Process Flow Characteristics; Process Selection Decisions; Vertical Integration.</p> <p>Decision Theory: Decision Making Environment; Decision Making Under Risk and Uncertainty; Decision Trees and Utility Theory. Break-Even Analysis and its Applications.</p> <p>Forecasting: Time Series and Causal Forecasting Methods; Monitoring and Controlling Forecasts;.</p> <p>Facilities Decisions: Capacity, Capacity planning, Layout, Process and product layouts, Facility location</p> <p>Total Quality Management, Quality Management tools, Six Sigma, Pareto charts, Cause and effect diagram</p> <p>Linear Programming: Graphical Methods; Simplex Methods; Sensitivity Analysis; and Linear Programming Applications.</p> <p>Queuing Theory: Waiting Line Cost; Characteristics of A Queuing System; Single-Channel and Multi-Channel Queuing Models.</p> <p>Project Management: Scheduling Methods; Pert Networks; Critical Path Method; Project Management Concept.</p>		
Teaching Methodology	Face-to- face		
Bibliography	<p>E - book title: Operations Management PROCESSES AND SUPPLY CHAINS, GLOBAL EDITION LEE J. KRAJEWSKI, LARRY P. RITZMAN, MANOJ K. MALHOTRA PEARSON</p> <p>R. Chaise, N. Aquilano, R. Jacobs: OPERATIONS MANAGEMENT FOR COMPETITIVE ADVANTAGE, McGraw Hill. Latest Edition</p> <p>Frederick S. Hiller and Mark S Hiller : INTRODUCTION TO MANAGEMENT SCIENCE, McGraw Hill</p>		

	<p>Frank Dewhurst : QUANTITATIVE METHODS FOR BUSINESS AND MANAGEMENT, McGraw Hill</p> <p>Additional material will be provided by the instructor.</p>								
<p>Assessment</p>	<table border="1" data-bbox="500 405 1260 558"> <tr> <td data-bbox="500 405 1032 443">Examinations</td> <td data-bbox="1032 405 1260 443">70%</td> </tr> <tr> <td data-bbox="500 443 1032 480">Assignments</td> <td data-bbox="1032 443 1260 480">20%</td> </tr> <tr> <td data-bbox="500 480 1032 518">Class Participation and Attendance</td> <td data-bbox="1032 480 1260 518">10%</td> </tr> <tr> <td data-bbox="500 518 1032 558"></td> <td data-bbox="1032 518 1260 558">100%</td> </tr> </table>	Examinations	70%	Assignments	20%	Class Participation and Attendance	10%		100%
Examinations	70%								
Assignments	20%								
Class Participation and Attendance	10%								
	100%								
<p>Language</p>	<p>English</p>								