



Victoria University
of Bangladesh

FALL SEMESTER-2016

COURSE PROFILE

POM 325: PRODUCTION & OPERATIONS MANAGEMENT

Level of Knowledge: Basic knowledge

Course Assessment:

Item/Activity	Marks
Work Sheet (Including Class Attendance & 4 Class Test)	25%
Assignment and Presentation(2)	10%
Mid-term test	25%
Final examination	40%
Total	100%

Grading and Point System:

Marks obtained (out of 100)	Letter Grade		Grade Point (4 point scale)
80% and above	A+	(A plus)	4.0
75% to less than 80%	A	(A regular)	3.75
70% to less than 75%	A-	(A minus)	3.50
65% to less than 70%	B+	(B plus)	3.25
60% to less than 65%	B	(B regular)	3.0
55% to less than 60%	B-	(B minus)	2.75

50% to less than 55%	C+	(C plus)	2.50
45% to less than 50%	C	(C regular)	2.25
40% to less than 45%	D	(D regular)	2.0
less than 40%	F	(Fail)	0.0

Note: I (Incomplete) may also be used under the provision of VUB regulations.

DETAILED CONTENTS:

Lecture-1,2	INTRODUCTION: Product,production,management,Operation Management-An overview,Definition of Production Management,Objectives and scopes of Production Management, functions of Production and Operation Department,Place of Production management Department in the organization, Types of production system,The Production cycle	Assignment no.1, Assignment no.2
Lecture—3,4,5	PRE-PLANNING STAGE OR PRODUCT DESIGN STAGE: Introduction, Factors to be Considered at Product Design Stage, Marketing aspect, Product characteristics, Economic analysis, Break-even analysis, Effect of management decision on break-even point, Profit and competitiveness, Production Aspect	W.S-1
Lecture—6,7,8	<ul style="list-style-type: none"> • Forecasting: Introduction, Definition, Period of Forecasting, Accuracy of Forecast, Forecasting Types, Direct Survey Method, Forecasting for established products, Steps in Forecasting, Forecasting Methods, Time series, Estimation of trend, Advantages of moving averages, Limitations, Method of Least Squares, Exponential Smoothing, Method of Measuring Seasonal Variation, Computation of Cyclic Variation, Correlations and Regression Analysis for Forecasting, Types of correlation, Simple, Multiple and partial correlation, Linear and non-linear correlation, Methods of measuring correlation, Significance of Correlation 	

	<p>Coefficient, How to Interpret the Coefficient of Correlation, Spearman's Coefficient of Rank Correlation, Coefficient of Concurrent Deviation, Correlation in Time Series, Methodology for calculation of correlation I short-term changes, Regression in Modern Statistical Literature, Difference between correlation and regression, Box-Jenkins Method, Method of Simulation, Markov process, Input-Output Analysis, Econometrics.</p>	
<p>Lecture— 9,10,11,12</p>	<ul style="list-style-type: none"> • Introduction, Production Planning, Factory planning, Process planning, Operation planning, Factors to be considered before Starting Production Planning, The Planning Quantity Standards, Requirement quantity, Write-off quantity, The Sanction quantity, Rate of stock turn over and order quantity, Planning specification, Routing Decisions, Make or buy decision, Material form and shape and quantity, Planning the Operations, Routing or operation layout, Operation planning, Planning of an assembly, Line of Balance (LOB): (or Line Balancing), Heuristic method, Kilbridge and wester method of balancing assembly line, Helgeson and Birnie Method, Some Problems One will Come Across in Mass production and Assembly Lines, Variable work element times, Breakdowns at work stations, Multi product lines, Linear Programming Method for Line Balancing, Modular Production and Group Technology, Automation and Robotics. 	<p>W.S-2, Submission of Assignment no.1</p>
	<p>MID TERM EXAMINATION</p>	
<p>Lecture—13,14</p>	<p>Scheduling, Loading, Dispatching and Expediting</p>	
<p>Lecture—15-16</p>	<ul style="list-style-type: none"> • Production Control: Part-A: Dispatching: Introduction, Stages and Activities of Control, Duties of a Dispatcher, The complexity of Dispatching, Aims of Dispatching, Dispatching Systems, Due date sequence filing, Dispatching with operation scheduling, Documents Maintained by Dispatching Department, Route card, Job card, Inspection card, Move card, Part-B: Expediting or Follow up of Progressing: Types of Follow-up, Program control, Symbols used in Gantt chart, 'Z' chart, Tabulated records. 	<p>W.S-3</p>

Lecture—17,18	Capacity Management: Introduction, Definition of Capacity, Definition of Capacity Management, Forms of Capacity, Determining Capacity Requirements, Design Capacity, System Capacity, Determination of Equipment Requirements, Capacity Planning, Long-term capacity strategies, Short-term capacity planning.	
Lecture—19,20,21	Total quality management, process improvement, quality tools, quality control, inspection, Inventory management, nature and importance, requirements of effective management, Aggregate planning, basic strategies, techniques, aggregate planning in service, master scheduling process	W.S-4
Lecture—22,23	Logistics, E-commerce, Purchasing, Supplier management, Project management, behavioral aspect, project life cycle, PERT and CPM, advantage of using PERT and potential sources of error, technology for managing project, risk management	Submission of Assignment no.2
Lecture—24	Lecture review	
	FINAL EXAM	

Required Text Book:

- 1) **Production and Operation Management-S.N Chary**
- 2) **Production and Operation Management- P. Rama Murthy**
- 3) **Operations-Management, William J. Stevenson, 8th edition, McGraw-Hill/Irwin, Inc, 2005(14686) .**
- 4) **An introduction to Management Science- Anderson, Sweeney, Williams.**

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