### Veer Narmad South Gujarat University

#### 405 – Production & Operations Management

###### Second Year BBA(Semester4) With Effect from AY2020-21

Objective of the course:

* + To expose students with the basics of OperationsManagement
	+ To understand basic management of manufacturingprocesses.
	+ They must appreciate that fundamentals of Operations Management are also applicable to production ofservices.
	+ They should also be exposed to quality assurancetechniques.

Teaching Pedagogy:

Lectures, Presentations, Group Projects, Industrial Visit (Strongly Advisable)

**Course Content:**

**Unit 1: Introduction toProductionManagement (15%)**

Definition of Production, Production Management, Operations, Operations Management, Difference between Production and Operations, Scope of Operations Management, Significance of Operations management, Interface of Operations Management with other disciplines, Difference between Goods and Services, Different Types of Production Systems – Continuous, Intermittent and their sub-types with merits and demerits

Unit 2: Plant Layout andMaterialHandling (15%)

* + Plant Layout: Definition, Factors affecting choice of layout, types of layouts, Principles of a good plantlayout
	+ Material Handling: Concept, Definitions, Types of Material Handling Equipments, Principles of MaterialHandling

Unit 3: Inventory Control(WithNumerical) (20%)

Definition and Concept of Inventory, Inventory Control, Types of Inventory, Various Classification of Inventory Control: ABC Analysis, VED Analysis, FSN Analysis, Cost Associated with Inventory Control, Basic EOQ Model & Its Assumptions, EOQ Model with discounts, Reorder level, Lead time, Safety Stock, Numerical Problems on EOQ Model, ERLQ model and its assumptions, Numerical problems on ERLQ

Unit 4: Production Planning (With Numerical) and Quality Control (Theory only) (25%)

* + Production Planning: Definition and Concept, Concept of Aggregate Production Planning, Master Production Schedule: Definition, Flow Chart, General Explanation, Functions, Process, Material Requirement Planning: Definitions, Flowchart, Inputs and Outputs, Capacity Requirement Planning: Definition, Flow Chart, General Understanding, Inputs and Outputs, Methods of Capacity Adjustments, Scheduling: Backward and Forward, Priority Sequencing Rules, Strategies, Assignment Problems (With Numerical), Johnson’s Rule (WithNumerical)
	+ Quality Control: Definitions and Methods (Statistical Quality Control, Quality Circles, Genichi Taguchi’s Quality Loss Function, TQM, Zero DefectApproach)

Unit 5: Work Study(WithNumerical) (25%)

Definition and Concept of Work Study, Basic Procedure of Work Study, Symbols used in Work Study, Method Study: Definition, Process of Method Study, Recording Techniques in Method Study (Charts, Diagrams and Photographic Techniques), Time Study (Work Measurement): Definitions, Process, Direct and Indirect Methods used in Work Measurements, Elements, Various types of Allowances, Numerical Problems on Man Machine Charts, Calculations of Standard Time, Normal Time and Allowances

***Suggested Readings:***

1. *Operations Management- By Joseph Monks , McGrawHill*
2. *Operations management – By Everett Adams,PHI*
3. *Operations Management – By Martinich,PHI*
4. *Operations Management – By Krajewski,PHI*
5. *Operations Management – By William Stevenson, McGrawHill*
6. *Operations Management – By Russell &Taylor*
7. *Work Study: ILO, Geneva* ***(For Unit5)***
8. *Production and Operations Management by K.Ashwatthappa*