

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT
COURSE CURRICULUM
COURSE TITLE: PRODUCTION PLANNING, MANAGEMENT & CONTROL
(COURSE CODE: 3355102)

Diploma Programmes in which this course is offered	Semester in which offered
Computer Aided Costume Design and Dress Making	5 th Semester

1. RATIONALE

This course will familiarize the students about the need and importance of various production systems and its implications on other dependent processes and measurement parameters in an apparel manufacturing process. Besides, it will help them to prepare time and action plan for a given order ensuring maximum utilization of manufacturing facility so that productivity or efficiency of production is improved.

2. LIST OF COMPETENCY (Programme Outcome according to NBA terminology)

The course content should be taught with the aim to develop required skills in the students so that they are able to acquire following competency:

- **Improve the productivity of manufacturing facility in dress making industry through production planning, management and control**

3. COURSE OUTCOMES

The theory should be taught and practical should be carried out in such a manner that students are able to acquire different learning outcomes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.

- i. Explain the need and importance of apparel production planning and control
- ii. Explain the process of managing by objectives
- iii. Carry out production planning and work allocation for given situation
- iv. Plan preproduction activities for given situation
- v. Derive time plan and action plan for given order execution

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
L	T	P		Theory Marks		Practical Marks		Total Marks
4	0	0	4	ESE	PA	ESE	PA	
				70	30	0	0	

Legends: L-Lecture; T – Tutorial; P -Practical; C – Credit; ESE -End Semester Examination; PA - Progressive Assessment.

5. DETAILED COURSE CONTENT

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
Unit –I Management and its Evolution	1a. Describe the development of management and its functions for improving productivity in organisation.	1.1 Historical development 1.2 Definition of Management - Science or Art 1.3 Management and Administration 1.4 Development of Management 1.5 Functions of Management 1.6 Types of Business Organization
Unit –II Apparel production planning and control	2a. Explain the need and importance of apparel production planning and control 2b. Define activities taken under apparel production planning and control	2.1. Importance of apparel production planning 2.2. Definitions of activities taken under apparel production planning and control
Unit– III Terminology for apparel production and planning	3a.Explain the terminologies associated with apparel production and planning	Terminologies associated with apparel production and planning 3.1. Production 3.2. SAM and SMV 3.3. WIP 3.4. Bottle neck 3.5. Critical operations 3.6. Productivity 3.7. Line efficiency 3.8. Throughput time 3.9. Lead time 3.10. Pitch time and floater
Unit– IV Kinds of manufacturing system	4a. Familiarize and Differentiate with different manufacturing system associated with apparel production viz. - Make through system	Manufacturing system 3.1. Make through system 3.2. Assembly system 3.2.1 Progressive bundle system 3.2.2 Unit Production system 3.3. Modular production system

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
	<ul style="list-style-type: none"> - Assembly system - Modular production system - Quick response and flexible production system. 4b. Describe the effects of production systems on production parameter	3.4. Quick response and flexible production system 3.5. Effects of production system on production parameter -Machine layout, Through put, response time, WIP, line efficiency, productivity, skill requirement, machine requirement
Unit -V Planning	5a. Explain the process of managing by objectives 5b. Describe the steps involved in planing	5.1.Nature & Purpose 5.2 Steps involved in Planning 5.3 Formulating Objectives 5.4 Process of Managing by Objectives, Strategies, Policies & Planning Premises 5.5 Forecasting and Decision-making.
Unit– 6 Production planning and work allocation	6a. Carry out production planning and work allocation for given situation	6.1. Operation breakdown 6.2. Process flow diagram 6.3. Line planning 6.4. Calculation for line efficiency 6.5. Machine layout
Unit –7 Preproduction activities	7a. Plan preproduction activities for given situation	7.1. Lab dips 7.2. Fabric procurement 7.3. Trims procurement 7.4. Label procurement 7.5. Embroidery 7.6. Printing
Unit–8 Time and Action Plan	8a. Derive time plan and action plan for given order execution	8.1. Preparation of time and action plan for entire order execution 8.2. Production Planning Control report generation

6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total
1.	Management and its Evolution	04	02	03	00	05
2.	Apparel production planning and control	04	04	03	00	07
3.	Terminology for apparel production and planning	08	06	03	00	09
4.	Kinds of manufacturing system	10	04	10	00	14
5.	Planning	08	02	03	02	07
6.	Production planning and work allocation	10	02	08	04	14

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total
7.	Preproduction activities	06	02	03	02	07
8.	Time and Action Plan	06	02	03	02	07
Total		56	24	36	10	70

Legends: R = Remember; U= Understand; A= Apply and above levels (Bloom's Revised taxonomy)

7. SUGGESTED LIST OF EXPERIMENTS

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8. SUGGESTED LIST OF STUDENT ACTIVITIES

- Industry visit of student with focus on variety of manufacturing systems and report submission on same.
- Student will do line planning for a given real life situation in class room.
- Students will prepare time and action plan for given order execution.

9. SPECIAL INSTRUCTIONAL STRATEGIES (If any):

- Give case studies based on real life situation and ask student to prepare action plan for situation given case study.
- Arrange group discussion of the students on appropriateness of the given plan and to identify weaknesses in the given plan and give suggestions for improvement.

10 SUGGESTED LEARNING ACTIVITIES

A. List of Books

Sr. No.	Title of Book	Author	Publication
1.	Technology of clothing Manufacturers	Harold Carr & Barbera Latham	Blackwell Science
2.	Apparel Manufacturing Analysis	Jacob Solinger	Bobbin Media Corporation, 1988
1.	Essentials of Management	Harold Kooritz & Heinz Weihrich	Tata McGraw-Hill, 1998
2.	Essentials of Management	Joseph L Massie	Prentice Hall of India, (Pearson) Fourth Edition, 2003.

- A. List of Major Equipment/ Instrument**
- i. Audio visual equipment to record process video for study
 - ii. Lux meter
 - iii. Equipment to take measurement – scale Inch tape, inner and outer diameter Caliper etc
 - iv. Digital stop watch mounted on a writing pad
- C. List of Software/Learning Websites**
- i. www.osho.com

11 COURSE CURRICULUM DEVELOPMENT COMMITTEE

Faculty Members from Polytechnics

- **Dr.(Ms) F. V. Kugasiya**, Lecturer CACDDM, GGP, Ahmedabad
- **Prof. Mrs. U. B. Patel**, Lecturer, Department of CACDDM, G.P.Dahod.
- **Prof. Ms. A. R. Rathod**, Lecturer, Department of CACDDM, G.G.P., Ahmedabad.
- **Prof. Ms. M. B .Panchaliya**, Lecturer, Department of CACDDM, Sir. BPTI, Bhavnagar.

Co-ordinator and Faculty Members from NIFT-Gandhinagar

- **Prof. Pavan Godiawala**, Director and Professor, Fashion Technology

Co-ordinator and Faculty Members from NITTTR

- **Prof. Shashi Kant Gupta**, Professor and Coordinator for State of Gujarat.
- **Prof. (Mrs.) Chanchal Mehra**, Associate Professor, Department of Vocational Education and Entrepreneurship Development.