

# GUJARAT TECHNOLOGICAL UNIVERSITY

## TEXTILE ENGINEERING (25) MANAGEMENT OF TEXTILE PRODUCTION SUBJECT CODE: 2722512 SEMESTER: II

**Type of course:** Elective

**Prerequisite:** Basic knowledge of management at BE Level.

**Rationale:** The performance of all latest developments in machinery depends on the way they are managed. Effective use of management tools can bring in great improvement in performance of modern technology in terms of productivity, quality and cost.

### Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks						Total Marks
L	T	P		Theory Marks		Practical Marks				
			ESE (E)	PA (M)	ESE (V)		PA (I)			
		ESE			OEP	PA	RP			
3	2#	0	4	70	30	30	0	10	10	150

### Content:

Sr. No.	Topics	Teaching Hrs.	Module Weightage
<b>1</b>	The Textile Industry of India : Past & its evolution to the present day, The structure of the Indian Textile Industry: Cotton textile sector, Jute textile sector, Silk textile sector, Man-made textile sector, Wool Textile sector, Statistics of Indian textile business (Domestic & Export) and World textile trade, Textile policy, World trade practices, norms, barriers, etc.,	8	20
<b>2</b>	Production planning and control; product mix linear programming concepts. Inventory control models. Replacements and maintenance problems. Techniques of project evaluation. Mill planning. Forecasting, concept and time series models. Management information systems.	8	20
<b>3</b>	Sequencing. Assignment techniques. Method study. Marketing management research and planning. Zero defect concepts. Modernization.	8	20
<b>4</b>	Cost Concepts: Direct/indirect, Fixed/variable, Total cost. Inventory costing : FIFO, LIFO, Weighted average methods. System of costing: Job, order, batch, process, unit & operating cost joint & byproduct. Cost Standards in Textiles : Cost structure in textile industry, Cost of raw material/labour/utilities. Cost Control: Standard costs, variance analysis, determination of cost per kg of yarn, per kg (metre) of fabric, measures for cost reduction, selling price decision for yarn/fabric. Profit planning: Cost volume - profit analysis, Break Even point.	8	20
<b>5</b>	Project formulation and Appraisal: Appraisal concept, Need for appraisal, Methodology, Various aspects - market, management, technical, financial and economic, Key financial indicators in appraisal, Investment decision from appraisal report, Post-project appraisal.	8	20

**Reference Books:**

1. Li Y., Shen Y., Yao L. and Newton E., "The WTO and International Denim Trading" The Textile Institute, 2003
2. Shishoo R., "The Global Textile and Clothing Industry: Technological Advances and Future Challenges", Woodhead Publication, 2014
3. Bhave P.V. & Srinivasan V., "Cost Accounting in Textile Mills", ATIRA, 1974
4. Jones, R.M., "The Apparel Industry" Blackwell Science, 2002
5. Colovic G., "Management of Technology Systems in Garment Industry" Woodhead Publishing India Ltd, 2011
6. Journals: Textile Research Journal, Princeton, USA and Journal of Textile Institute, Manchester, UK

**Course Outcome:**

After learning the course the students should be able to:

1. Understand the structure of the textile industry – Global & Indian.
2. Understand the impact of technology on the restructuring of the industry and the changes in the trade balance.
3. Apply the production planning knowledge to the textile processes.
4. Apply the tools of various method study and marketing effectively for the textile products.
5. Understand the role of cost structure in the overall profitability analysis of the textile operations

**List of Open Source Software/learning website:** <http://nptel.iitm.ac.in>, World Wide Web, Google Search Engine etc.

**Review Presentation (RP):** The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website.