VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

B. E. IV (8TH Semester)

Sr. No.	Courses	Course No.	Teaching Scheme		
			L	T	P
1.	Quality Control In Wet Processing	TP - 801	4	-	3
2.	Technology Of Finishing - II	TP - 802	3	-	-
3.	Production Management & Energy Conservation In Wet Processing	TP - 803	3	-	-
4.	Technology Of Dyeing - III	TP - 804	4	-	3
5.	Import Export Management	TP - 805	3	1	-
6.	Project Work	TP - 806	-	-	6
			17	**1**	**12**

Total teaching scheme is of 30 hours

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Scheme of Teaching and Examination BE IV
(8TH Semester) Textile Processing

Course	Course No.	Teaching Schedule			Examination Scheme						Grand Total
					Theory Exam		Practical/Quiz/Viva Examination				Marks
		Theory	Tutorial	Practical	Duration hours	Marks	Sem. End Exam	Tutorial Evaluation	Cont. Int. Evaluation	Total 8+9+10	7+11
1	2	3	4	5	6	7	8	9	10	11	12
Quality Control In Wet Processing	TP - 801	4	-	3	3	100	45	-	30	75	175
Technology Of Finishing - II	TP - 802	3	-	-	3	100	-	-	-	-	100
Production Management & Energy Conservation In Wet Processing	TP - 803	3	-	-	3	100	-	-	-	-	100
Technology Of Dyeing - III	TP - 804	4	-	3	3	100	45	-	30	75	175
Import Export Management	TP - 805	3	1	-	3	100	-	25	-	25	125
Project Work	TP - 806	-	-	6	-	-	125	-	100	225	225
TOTAL		**15**	**4**	**11**		**500**	**215**	**25**	**160**	**400**	**900**

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 801, QUALITY CONTROL IN WET PROCESSING

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam		Grand Total
			Duration (hr.)	Marks	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.					
4	-	3	3	100	45	30	175

Theory

1. **Object Of Process Control :**
   Importance,Advantages and Functions. Process control Measure in Bleaching, Dyeing, Printing and Finishing. Important tests to control the processing parameters.
2. **Object Of Quality Control :**
   Difference between quality control and process control. Control Staff with Management and fellow Technicians in production department. Quality control organization and expansion. Responsibilities and relation of Quality Major areas and important key part in wet processing w. r. t. Quality Control. Important tests and consumption norms at various stages of processing w. r. T. Quality Control.
3. Elements of Instrumention,Various instruments to measure pressure, temperature, flow and other process controlling operations.
4. Inspection and Analysis of Finished goods. Inspection of Faults & Damages. Causes and classification of faults & damages Precautions & Remedies
5. Fastness properties of dyed and printed fabrics.- Different types like Washing fastness, Light fastness, Rubbing fastness, Perspiration fastness, Scrubbing fastness etc.
6. Cost Control in wet processing by recipe formulation , optimization of parameters, Selection of raw materials etc.
7. Implementations of ISO 9000 series.

References :-

01.	Process House Laboratory	Luthra & Bapu Deshpande
02.	Textile Mills In The Changing Environment	Gulrajani - The Textile Association, 1982
03.	Towards Zero Defects	Amubhai Patel- Meena Publishers,1974.
04.	Process & Quality Control In Chemical Processing Of Textiles	S. V. Gokhle & J. R. Modi., - ATIRA pub., 1992.

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 802, TECHNOLOGY OF FINISHING - II

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam		Grand Total
			Duration (hr.)	Marks	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.					
3	-	-	3	100	-	-	100

Theory

1. Raising, Shearing & Cropping, Seuding, Napping etc - Processes and machines & applications.
2. Various methods & applications of Calendering lik-Swizzing, Friction Finish, Chasing, Schreniring, Embossing, Felt Calendering etc.
3. Scutching / opening, Conditioning and Damping. - Mechanism, Application & Various methods.
4. Heat setting of synthetic fibre fabric, Working and Construction & uses of Stenter. A brief discussion on different types of stenters.
   Different type of driers - Cylinder, Hot Flow, InfraRed, Float Driers etc.
   Application and working of different types of hydroextractors.
5. Different type of mangles and mangle finishes.- Types, construction &working of padding mangles.
6. Creping - Importance of constructions of fabrics, creping chemicals, process and machines.
7. Anti shrink treatment - Principle of antishrink treatment. Different types of Sanforizing machines.
8. Felting and Antifelting of wool - mechanical and Chemical methods.
9. Recent Developments in finishing machines.

References :-

01.	An Introduction To Textile Finishing	Marsh J. T.
02.	Technology Of Finishing	Shenai V. A.
03.	Textile Finishing	Prayag - Mrs. L. R. Prayag

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 803, PRODUCTION MANAGEMENT & ENERGY CONSERVATION IN WET PROCESSING

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam		Grand Total
			Duration (hr.)	Marks	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.					
4	-	-	3	100	-	-	100

Theory

1. Selection of site for process house. An over all plan for the building of the various departments like grey room, singeing room, bleach house, dye house, printing department, finishing laboratory, folding, stores, boilers, and power house etc.
2. Planning / Programming for every day production from Grey dept. to Folding dept. Dyes, chemicals and other raw materials requirement for the planned productions Periodical stock checking. Water, steam and power requirements for planned production. Quality of water, water treatments, Ion exchange, Effluent treatments, Recycling etc.
   Methods of calculations for consumption of Water, Steam & Electricity.
3. Maintenance of machinery - Preventive and Breakdown. Importance of Preventive maintenance. Functions of maintenance.
4. Energy conservation in process house. Culture & Management, Energy cell, Energy Monitoring and Comparision with standards, Energy conservation approach, Motivation of energy conservation.
5. Energy conservation Areas - Electrical Energy conservation, Mechanical Energy conservation, Optimisation, and minimisation of consumption of dyes and chemicals, process modification. Adoption of non convensional energy sources, Fuel consumption and conservation. Heat economy and waste heat recovery.
6. Control and Assessment of Pollution. Pollution load of various chemicals, Air pollution, water pollution, noise pollution, Radiation pollution, Oil pollution etc. - Causes and Remedies.
7. Hazard in the process house. Fumes of chemicals, electrical Hazards, Pressure Vessels-Safety Precautions.

References :-

01.	Industrial Organisation	Teredesai P. L. - M/s. N. C. Shah of Acharya Book
02.	Energy Conservation In Textile Wet Processing	Gulrajani-Textile Association,1982
03.	Chemistry Of The Textile Industry	C..M. Carr-Blakie Academic & professionals,
04.	Occupational Health & Safety In Textile Mills	V. A. Shenai - Sevak pub., 1978
05.	Introduction To Management In Dyeing Industry	Park J. - S. D. C. Pub., 1984

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 804, TECHNOLOGY OF DYEING - III

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam		Grand Total
			Duration (hr.)	Marks	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.					
4	-	3	3	100	45	30	175

Theory

1. **Nature of Dye Fibre Bonds:**
   Vanderwaals Forces, H-bonding, Ionic and Co-valent Bonds
2. Kinetics of Dyeing, Affinity of dyes towards fibres, Thermodynamics of Dyeing process.
3. Adsorption isotherm, equilibrium adsorption & factors influencing the same. Saturation value, diffusion co-efficients, glass transition temperature (Tg) & its effect on dyeability, dye diffusion temperature (Td).
4. Study of Heat of Dyeing using various Dye - Fibre systems such as Direct, Vat, Reactive dyes on cellulose, Acid dyes on Nylon, Wool & Silk, cationic dyes on CDPET and Acrylic. Study the affinity of dyes for water and fibres such as cellulosic, proteins/polyamides, polyester. Partition ratio for Disperse dye on polyester. Rate of Dyeing of ionic and non-ionic dyes on cellulose, protein & synthetic fibres.
5. Effect of fibre structure, chemical & physical such as drawing, heat setting, denier, twist. Effect of -OH, -COOH, $-NH_2$ etc. groups on dyeing diffusion of dyes, determination of diffusion co-efficient of disperse dyes on polyester.
6. Competibility of dyes on different groups on fibres e.g. Acid dyes on Nylon, Direct dyes on cotton, Disperse dyes on Polyester & Cationic dyes on Acrylic & CDPET fibres.
7. Development in dyeing such as,
   (A) Solvent Dyeing (B) Space Dyeing (C) Foam Dyeing etc.

References :-

01.	Dyeing & Chemical Technology Of Textile Fibres	E.R.Trotman
02.	Chemistry Of Dyes And Principle Of Dyeing	V. A. Shenai
03.	Chemistry Of The Textile Industry	C. M. Carr - Blakie Academic & Proffessionals, 1995.

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 805, IMPORT EXPORT MANAGEMENT

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam			Grand Total
			Duration (hr.)	Marks	Tutorial	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.						
3	1	-	3	100	25	-	-	125

Theory

1. **Introduction to International Business :**
   * Basis of International Trade
   * Instruments of Trade : Tariff / Quotas / Exchange Control / Exchange Rate.
   * Balance of Payment & Balance of Trade
   * International Economic Environment : Legal / Cultural / Political / Technical
   * International Economic Organisation : IMF / IBRD / UNCTAD / WTO
2. **India's Export - Import Frame Work :**
   * Export - Import Policies (EOU / EPZ / Licensing)
   * Promotions and Regulations
   * Institutional set - up for Export Promotions
   * Canalisation, STC, MMTC
   * Export Finance, Export Procedure
   * Trends in India's Foreign Trade
3. **International Marketing Strategies :**
   * Overseas Market Research, Strategy for Entry
   * Identification and selection of product
   * Market Planning
   * Pricing for International Marketing
   * Channel of Distribution, Trade Blocks

References :-

01.	Fundamentals of Business Organisation & Management	Y. K. Bhusan
02.	Export Import management Himalaya Publishing House	B. S. Rathore & J. S. Rathore
03.	Export Management Himalaya Publishing House	T. A. S. Balgopal
04.	International MarketingManagement & Indian Perspective	R. L. Varshney & B. Bhattacharya

VEER NARMAD SOUTH GUJARAT UNIVERSITY

SCHEME OF TEACHING

Semester - VIII

B. E. IV (TEXTILE PROCESSING)

TP - 806, PROJECT WORK

Teaching Scheme (No. Of Contact hr.)			Theory Exam		Practical/Quiz/Viva Exam		Grand Total
			Duration (hr.)	Marks	Sem. End Exam	Cont. Int. Evaluation	
Theory	Tut.	Pract.					
-	-	6	-	-	125	100	225

Student will select a topic for project work in consultation with the guiding teacher. The student will have to do literature survey & experimental work on that topic. At the end of the semester he/she will have to submit a report on his/her work. The student will present his/her topic infront of experts and staff. His/her performance will be assessed on the basis of his/her project report and presentation.