

**Fashion Technology**

**(FT)**

**(III to VI Semester)**

**Semester III**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme corecourse-1	FTPC 301	Traditional Costumes & Clothing Production Machineries and equipments.	2	1	0	3	3
2	Programme corecourse-2	FTPC 302	Basics of Textile Manufacturing-1	3	0	0	3	3
3	Programme corecourse-3	FTPC 303	Flat Pattern Making	2	0	0	2	2
4	Programme corecourse-4	FTPC 304	Contemporary Fashion & Fashion Design	2	0	0	2	2
5	Programme corecourse-5	FTPC 305	Basic Garment Production lab	0	0	4	4	2
6	Programme corecourse-6	FTPC 306	Flat Pattern Making & Adaptation Lab	0	0	4	4	2
7	Programme corecourse-7	FTPC 307	Fashion Sketching, Drawing & Designing lab	0	0	4	4	2
8	Programme corecourse-8	FTPC 308	Tailoring Tools & Equipment Lab	0	0	2	2	1
9	Programme corecourse-9	FTPC 309	Garment Production lab-1	0	0	2	2	1
10	Summer Internship-I (3 to 4 weeks) after II <sup>nd</sup> Semester	FTSI 310		0	0	0	0	2
<b>Total</b>				<b>9</b>	<b>1</b>	<b>16</b>	<b>26</b>	<b>20</b>

**Semester IV**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-10	FTPC 401	Basics of Textile Manufacturing-II	2	1	0	3	3
2	Programme core course-11	FTPC 402	Fabric Structure & Textile Testing	2	1	0	3	3
3	Programme core course-12	FTPC 403	Fashion Business Management & Fashion Merchandising	2	0	0	2	2
4	Programme core course-13	FTPC 404	Traditional embroidery & Accessory Design	2	0	0	2	2
5	Programme core course-14	FTPC 405	Garment Production lab-II	0	0	2	2	1
6	Programme core course-15	FTPC 406	Computer Application in fashion lab	0	0	2	2	1
7	Programme elective course-1	FTPE 407	Garment Designing & Draping lab	0	1	4	5	3
8	Humanities & Social Science- 4	HS 408	Professional Skill Development	2	1	0	3	3
9	Minor Project	FTPR 408		0	0	4	4	2
10	Mandatory Course-1	AU410	Essence of Indian Knowledge and Tradition	2	0	0	2	0
			<b>Total</b>	<b>12</b>	<b>4</b>	<b>12</b>	<b>28</b>	<b>20</b>

**Semester V**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-16	FTPC 501	Textile Dyeing & Printing	2	1	0	3	3
2	Programme core course-17	FTPC 502	Fashion Communication & Consumer Behaviour in Fashion	2	0	0	2	2
3	Programme core course-18	FTPC 503	Textile Testing lab	0	1	2	3	2
4	Programme core course-19	FTPC 504	Textile Dyeing & Printing lab	0	0	2	2	1
5	Programme core course-20	FTPC 505	Computer Aided Fashion Design Lab	0	0	2	2	1
6	Programme elective course-2  (Any one to be selected)	FTPE 506/A	Home Textile	2	1	0	3	3
	FTPE 506/B	Clothing Technology						
7	Programme elective course-3	FTPE 507	Advance Pattern Making Lab	0	1	4	5	3
8	Open elective course-1	(Any one to be selected from Annexure-I)		3	0	0	3	3
9	Summer Internship-II (6 weeks) after IV Semester	FTSI 509		0	0	0	0	3
10	Major Project	FTPR 510		0	0	2	2	1
<b>Total</b>				<b>6</b>	<b>4</b>	<b>12</b>	<b>22</b>	<b>22</b>

**Semester VI**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-21	FTPC 601	Textile Finishing	2	1	0	3	3
2	Programme core course-22	FTPC 602	Sewing Technology or Fashion Research	1	1	0	2	2
3	Programme elective course-4	FTPE 603	Apparel Production & Quality Control	2	1	0	3	3
4	Humanities and Social Science course- 5	HSS 604	Entrepreneurship and Start-up's	3	1	0	4	4
5	Open elective-2	(Any one to be selected from Annexure-II)		4	0	0	4	4
6	Mandatory Course-2	AU 606	Indian Constitution	2	0	0	2	0
7	Major Project	FTPR 607		0	0	6	6	3
8	Seminar	FTSE 608		2	0	0	2	1
			<b>Total</b>	<b>12</b>	<b>4</b>	<b>6</b>	<b>22</b>	<b>20</b>

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## DETAILED SYLLABUS

### Semester III

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme corecourse-1	FTPC 301	Traditional Costumes & Clothing Production Machineries and equipments.	2	1	0	3	3
2	Programme corecourse-2	FTPC 302	Basics of Textile Manufacturing-1	3	0	0	3	3
3	Programme corecourse-3	FTPC 303	Flat Pattern Making	2	0	0	2	2
4	Programme corecourse-4	FTPC 304	Contemporary Fashion & Fashion Design	2	0	0	2	2
5	Programme corecourse-5	FTPC 305	Basic Garment Production lab	0	0	4	4	2
6	Programme corecourse-6	FTPC 306	Flat Pattern Making & Adaptation Lab	0	0	4	4	2
7	Programme corecourse-7	FTPC 307	Fashion Sketching, Drawing & Designing lab	0	0	4	4	2
8	Programme corecourse-8	FTPC 308	Tailoring Tools & Equipment Lab	0	0	2	2	1
9	Programme corecourse-9	FTPC 309	Garment Production lab-1	0	0	2	2	1
10	Summer Internship-I (3 to 4 weeks) after II <sup>nd</sup> Semester	FTSI 310		0	0	0	0	2
<b>Total</b>				<b>9</b>	<b>1</b>	<b>16</b>	<b>26</b>	<b>20</b>

## Traditional Costumes and Clothing Production Machineries & Equipments

Course Code	FTPC 301
Course Title	Traditional Costumes and Clothing Production Machineries & Equipments
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme Corecourse-1

**Course Outcomes:** - 1) Knowledge On costumes aspects & design development ideas  
2) Idea about different countries and India's state wise traditional costumes & tribal culture.  
3) Knowledge on French, English & American fashion.  
4) Knowledge on various machineries used in Clothing production and their principal of operations.  
5) Also identify different scope of development in the process of production to improve efficiency and optimum production.

### **Course Content:-**

#### **Module- 1: Introduction of costume & Costume of India:-**

Number of class hours: 7 hours.

#### **Suggestive Learning Outcomes:**

- 1) To learn about different aspects of costumes.
- 2) To gain design development ideas.
- 3) Idea about India's different costumes & culture.

Introduction of costume, factors influencing the costume changes. Classification of different types of costume.

Study of Traditional costume of different state of India. Design ideas and development of Indian traditional state costume.

#### **Module- 2: Tribal costume & Folk costume of different countries:-**

**Number of class hours: 6 Hours**

#### **Suggestive Learning Outcomes:**

- 1) To learn about tribal cultures & costumes.
- 2) To gain traditional costumes idea of different countries.

Introduction of Tribal Costume. Study of designs of traditional Indian tribal costume. Costume of north eastern state – Tripura, Assam, Manipur.

Study of costume of Pakistan, China, Sri Lanka, Thailand etc. Study of African Costume.

#### **Module-3: French Costume during Renaissance & English & American Costume:-**

Number of class hours: 4 Hours

**Suggestive Learning Outcomes:** 1) Gaining knowledge on French fashion.  
2) Learn about English & American fashion history.

French costume during Renaissance 1400-1600.

English costume during middle ages. American costume from 18 and 20 century.

#### **Module-4 : Knowledge of machines**

Number of class hours: 6 Hours

**Suggestive Learning Outcomes:**

- 1) Gaining knowledge on basic machineries used in garment industry.
- 2) Learn about different machineries used in clothing production and their mechanisms.

Parts of normal and Electronic sewing machine and working of sewing machines.

Functions of each part of sewing machines –hand operated, treadle operated and electric motor operated.

Identify problems during practical and rectification for the problems.

#### **Module- 5: Functional Mechanisms**

Number of class hours: 5 Hours

**Suggestive Learning Outcomes:**

1) Gaining knowledge on modern / Electronic machineries used in garment industry.

2) Learn about mechanisms of some of the modern electronic machineries for better productivity.

General procedure follows in sewing process in Modern electronic machines.

Functions of each parts and their operations.

**References:** - 1) Katherine Morris Cester, “Historic Costumes”, Prentice Hall 2000.

2) Fringe G.S. “Fashion from concept to consumer” Prentice Hall

3) Jamila Brij bhu Shan, “The costume & textiles India” Prentice Hall



## Basics of Textile Manufacturing -1

Course Code	FTPC 302
Course Title	Basics of Textile Manufacturing -1
Number of Credits	3 (L: 3, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-2

### **Course Outcomes: -**

- 1) Identification of different types of fibres.
- 2) Gaining knowledge of different types of fibres and yarns.
- 3) learn about different characteristics / properties of different fibres & yarns.

### **Course Content:-**

#### **Module- 1: Introduction to fibre**

Number of class hours: 2hours.

- Suggestive Learning Outcomes: 1) Knowledge on Textile materials.  
2) To gain idea about different fibres.

Introduction to textile fibres: Classification of textile fibres, natural & synthetic with proper explanation.

#### **Module- 2: Fibre properties and uses**

Number of class hours: 6 Hours

Suggestive Learning Outcomes:

- 1) To learn about properties of different natural fibres & various manmade fibres.
- 2) To gain knowledge on physical structures of fibres.

Physical & chemical properties of all natural & synthetic fibres. Advantage of natural & synthetic fibres.

Various uses of --Cotton, Jute, Wool, Silk, Viscose, Nylon, Polyester, Acrylic, Polypropylene and other fibres.

Introduction to microfibers, Monofilament & multifilament.

#### **Module-3: Introduction to yarn**

Number of class hours: 4 Hours

- Suggestive Learning Outcomes: 1) Gaining knowledge on yarn manufacturing.  
2) Learn about different properties of yarns.

Detail study on various steps involved in Cotton yarn manufacturing.

Objective and process sequence in spinning of Cotton yarn starting from Blow room, Carding, Drawing, Ring frame,

Concept of Rotor spinning and friction spinning and the process in brief.

Comparison of yarn properties produced in different spinning technique and their advantage & limitations.

#### **Module-4: Properties of Yarn**

Number of class hours: 4 Hours

Suggestive Learning Outcomes: 1) Gaining knowledge on different properties of yarns and their applications.

2) Learn about various parameters of yarns for testing.

Concept of different properties of textile yarns (natural & synthetic) and scope of uses.

Concept of Texturisation, advantage, different types of texturization process, properties of textured yarn-its uses and limitations.

Yarn quality requirement for weaving and knitting. Properties of yarn quality parameter and its effect, Twist, ply, strength, etc. and uses.

#### **Module- 5: Concept of Technical & Fancy Yarn.**

Number of class hours: 4 Hours

Suggestive Learning Outcomes: 1) knowledge on Sewing threads and other technical yarns.

2) Learn about manufacturing properties of various fancy yarns.

Concept of Sewing threads, its manufacturing process, fibre used essential quality particulars of sewing thread.

Manufacturing and properties of fancy/novelty yarn. Applications of various Fancy/ Novelty yarns in fashion / Textile industry.

**References:** - 1.Sreenivasamoorthy, H.V “introduction to textile fibres” ATA, 1987.

2. Oxotoby E, Spun yarn technology, Butterworths, London, 1988.

3. Joseph M.L., Essential of textiles, Hold Rienhart Winston pub Co, New York, 1984.

4. Klien W.G., The technology of short staple spinning textile institute, Manchester, 1988.

5. Fibre science, Kannathan V.

6. Chemical Processing of synthetic fibre and blends, Datye K.V. and Vaidya.

## **Flat Pattern Making**

Course Code	FTPC 303
Course Title	Flat Pattern Making
Number of Credits	2 (L: 2, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-3

- Course Outcomes:** -
- 1) To learn about pattern making & designing tricks.
  - 2) Idea about measurement of different garments parts and positions
  - 3) Preparation idea on standard principles of basic block patterns
  - 4) Gaining idea about different measurement lines
  - 5) Knowledge on various sleeves, cap heights and collars pattern.

### **Course Content:-**

#### **Module- 1: Introduction**

Number of class hours: 2Hours

- Suggestive Learning Outcomes: 1) Knowledge on pattern making  
2) Idea about different designing & sewing tricks.

Introduction flat pattern making & adaptation. Study of Darts, pleats, frills, Gathers, Umbrella cuts.

#### **Module- 2: Basic Block**

Number of class hours: 4hours

- Suggestive Learning Outcomes: 1) Knowledge on measurement size chart.  
2) Idea about different garments parts and positions.  
3) Preparation idea on basic blocks

Measurement take-up size chart & meaning of sizes definition of various garment parts position. Basic block construction - Block preparation & correction

#### **Module-3: Pattern Making**

Number of class hours: 4hours

- Suggestive Learning Outcomes: 1) Learning about fitting of garments.  
2) Knowledge on standard principles of basic block patterns.

Pattern making by manipulation of dart elementary & advances dart manipulation. Basic principles & methodologies used to draft standard size block pattern for men, women & Children i.e. shirts, pants, skirts, jackets, dresses etc.

#### **Module-4: Basic pattern alterations**

Number of class hours: 2hours

Suggestive Learning Outcomes: 1) Gaining idea about different measurement lines.  
2) Knowledge on adjustment of sleeves.

Length & width adjustment. Bust Line, waist line, hip line adjustment. Arm hole, shoulder & sleeve adjustment. Princes' line & Cuts.

#### **Module- 5: Sample preparation**

Number of class hours: 4hours

Suggestive Learning Outcomes: 1) To gain idea about different sleeve blocks.  
2) Knowledge on various cap heights and collars.

Construction of sleeve block - crown height & its relationship with the fit of garment. Introduction to silhouettes of sleeve, sleeve variation – Cap, collar, set in collars& collar variation, one piece and two piece collar and convertible collar.

#### **References: -**

1. Dress pattern designing, Natalie Bray.
2. Pattern Drafting, Crosset and Dunlop.
3. Introduction to pattern cutting, grading and modeling, M. Goul Bourn.
4. Modern pattern design.
5. Flat pattern methods, Haller N.

### **Contemporary Fashion and Fashion Design**

Course Code	FTPC 304
Course Title	Contemporary Fashion and Fashion Design
Number of Credits	2 (L: 2, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-4

**Course Outcomes: -** 1) To learn about the impacts of cultural groups, religious belief on fashion

2) Idea about Mughal fashion and khadi fashion of India.

3) Knowledge on the effects of political events, economic and globalization of fashion.

4) Gaining idea about fashion industries and future

5) Gaining idea about designing skills and techniques and port folio.

### **Course Content:-**

#### **Module- 1: Influence and Invasion**

Number of class hours: 6Hours

Suggestive Learning Outcomes: 1) Knowledge on cultural groups, religious belief on fashion.

2) Idea on the impact of climate and geographical changes on fashion.

3) Knowledge on Mughal fashion and khadi fashion of India.

Role of Cultural groups, religions belief on fashion. Impact of climate conditions, geographical locations on changes of fashion. Influence of Racial groups, traditional practices on fashion.

Influence of Mugal invasion on contemporary fashion. Impact of East India Company & British Raj on changes of fashion. Role of Khadi Industry in shaping the Indian fashion.

#### **Module- 2: Role of Events and Information Technology**

Number of class hours: 4 hours

Suggestive Learning Outcomes:

1) Knowledge on the effects of political events, economic and globalization of fashion.

2) Idea about the impression of information technology on fashion.

Role of Political events on fashion. Role of economic of fashion. Role of globalization. Role of consumerism.

Role of Various media like cable T.V., News prints etc. Role of internet, on-line, shopping & E-Commerce. Role of Computer & its application.

#### **Module-3: Environment & Fashion Designers**

Number of class hours: 2hours

Suggestive Learning Outcomes: 1) Gaining Knowledge on fashion industries and future.

2) To learn about the roles of fashion designers.

Effect on recent environmental influences on society, fashion & industries & their future implication. Study of works of at least five Indian & International Contemporary fashion designer.

#### **Module-4: Designing Sources of inspiration and Port –Folio Management**

Number of class hours: 3hours

Suggestive Learning Outcomes: 1) Gaining idea about designing skills and techniques and port folio.

2) Knowledge on preparing designer files.

Selection of design, what is a design? How to design? Presentation techniques Flat sketches, port folio. Concept and meaning of Port-folio. Selection of topic / theme, design idea, feasibility of conducting port –folio. Importance of port folio project, preparation of project report, design details, port-folio. Knowledge of Mood board, story board

**Module- 5: Design collection for men/ women/ children & Role of Fashion Designer**

Number of class hours: 2 hours

Suggestive Learning Outcomes: 1) To gain idea about surface ornamentation techniques..

2) Knowledge on roles of fashion designers .

Use of medium of decoration on dresses such as embroidery, painting, texture, patches, colours, etc. Garment design details etc. Presentation on paper etc.

Introduction role of fashion designer, Fashion illustrator, textile designer.

**References: -**

1. Contemporary clothing, Dorothy S Lyle and Jeanne Brinkley.
2. Inside fashion Design, Sharon Lee Tata.
3. Inside fashion design, Sharon Lee Tata
4. Beyond the looking glass: Americas beauty culture, Perutz Caterine, William

Morrow and Co

**Basic Garment Production Lab**

Course Code	FTPC 305
Course Title	Basic Garment Production Lab
Number of Credits	2 (L: 0, T: 0, P: 2)
Prerequisites	
Course Category	Programme Corecourse-5

**Course Outcomes: -** 1) To learn about the patterns & variations.

2) Idea about garment construction.

3) Knowledge on the value added garments parts

4) Gaining idea about basics of draping.

5) Gaining idea about designing skills ,cutting and sewing.

### Course Content:-

1. **Basic pattern** : Prepare basic patterns and do variations. Grade the basic patterns.
2. **Construction** : Construct, finish and press the same using the drafted patterns. (a) Cuffs, b) Sleeves, c) Yokes, d) Pockets, e) Collars, f) Plackets and skirts
3. **Draping** : Advance to draping – style leading of basic bodies different type of collar, sleeve, cuffs and pockets.
4. **Pattern making** : Flat pattern technique, causes four fit, checking the fit of a garment solving fitting problems, Cutting and sewing of various garments.

### References: -

1. The technology of Clothing manufacture, Carr. H and Latham Barbara.
2. Clothing technology from fibre to fashion, Kilgus R.

### **Flat Pattern Making And Adaptation Lab**

Course Code	FTPC 306
Course Title	Flat Pattern Making And Adaptation Lab
Number of Credits	2 (L: 0, T: 0, P: 2)
Prerequisites	
Course Category	Programme Corecourse-6

- Course Outcomes: -**
- 1) To learn about the patterns blocks & variations.
  - 2) Idea about garment pattern alterations.
  - 3) Knowledge on the sample preparation.
  - 4) Gaining idea about basic value added garment pattern parts .
  - 5) Gaining idea about line adjustments.

### Course Content:-

1. **Making of Basic Blocks:** Making of Basic Blocks for Children, Making of basic blocks for ladies. Making of basic blocks for men.
2. **Basic Pattern Alterations:** Length & Width adjustment etc. Bust lines, waist line and hip line adjustment. ‘Armhole, shoulder and sleeve adjustment etc. Princess line & cuts.
3. **Sample Preparation** : Preparation of samples of the following and prepare a file : Darts, Pleats, Frills, Gathers, Umbrella cuts etc. Basic blocks for children, ladies, men etc.
4. **Construction** : Various types of sleeves, collars, yokes, pockets. Basic patterns of alterations such as Length & width adjustments Bust line, waist line and hip line adjustment. Armhole, shoulder and sleeve adjustment Princess line & cuts.

**References: -**

1. Dress pattern designing, Natalie Bray.
2. Pattern Drafting, Crosset and Dunlop.
3. Introduction to pattern cutting, grading and modeling, M. Goul Bourn.
4. Modern pattern design.
5. Flat pattern methods, Haller N.
6. Pattern making by Armstrong.

**Fashion Sketching, Drawing & Designing Lab**

Course Code	FTPC 307
Course Title	Fashion Sketching ,Drawing & Designing Lab
Number of Credits	2 (L: 0, T: 0, P: 2)
Prerequisites	
Course Category	Programme Corecourse-7

- Course Outcomes: -**
- 1) To learn about basic drawing techniques..
  - 2) Idea about human anatomy structure..
  - 3) Knowledge on sketching of different garment parts.
  - 4) Gaining idea about various costume drawings. .
  - 5) Gaining idea about colour wheels and selection of colours..

**Course Content:-**

1. Study of types and techniques of illustrations.
2. Study of Basic Anatomy.
3. Constant proportions of children, men, women in various poses.
4. Drawing faces and hair styles, Drawing arms and legs with accessories, creating various poses.
5. Drawing different types of necklines, collars, sleeves and cuffs, drawing skirt, pants and coats. Drawing blouses, shirts.
6. Costume drawing – Sketching the fall of the fabric, Accessory drawing.
7. Sketching different types of garments and costumes with black pen, water colour, sketching national costumes, and traditional costumes of India.



**References: -**

1. Dress selection and design, Harion Hillhouse.
2. Visual design, Goldstein and Goldstein.
3. Art in everyday life, M.F. Hepbirth / Eng. Uni. Press. Ltd.
4. Dress Designing, J.R. Garbth.
5. How to draw Human Figures, Sharan Lee Tata, Mona.
6. Complete Book of fashion Illustration Shafer Eduardis Hepper and Raw.

**Tailoring Tools & Equipments Lab**

Course Code	FTPC 308
Course Title	Tailoring Tools & Equipments Lab
Number of Credits	1 (L: 0, T: 0, P: 1)
Prerequisites	
Course Category	Programme Corecourse-8

- Course Outcomes: -**
- 1) To gain idea about various tools & equipments used in sewing.
  - 2) Idea about different sewing machine parts.
  - 3) Knowledge on principles of sewing machine and its maintenance.
  - 4) Gaining idea about embroidery machines and tools used..
  - 5) Gaining idea about safety measures.

**Course Content:-**

1. Study of measuring tools: inch tape, meter scale, different types of scales used for drafting and marking French Curve, Dress maker's square, Curved stick.
2. Study of marking tools : Tracing paper, tracing wheel, tailor's chalk, pencil, pins. Working with cutting tools: different types of scissors, seam ripper.
3. Study on Parts of machine and working of sewing machines.

4. Study on Disassembling and assembling of sewing machines and equipments. Cleaning and oiling of machine parts, machine. Changing of m/c parts and equipments.
5. Working with embroidery plate, needle threader, cloth guide, zipper etc.
6. Working with electric scissor, electric cutter, tracing wheel, button note attachment, braiders, folders. Techniques of mending, patching on samples.
7. Repairing –mending, patching, darning, renovating of garments etc.
8. Safety – safety measures / precautions to be taken while working with sewing machines etc.

**References: -**

1. Tailoring & Dress making by Thankar and Surti Prajabati (Guj).
2. Indian system of cutting by USHA Company.
3. Usha Tailoring guide by Reader’s Digest.
4. Readers Digest complete guide to sewing by Mabel D. Erwin, Macmillan Company.
5. Clothing for Moderns by Mabel D. Erwin.
6. Practical Dress Design, Principles of fitting and pattern by Reader’s Digest.

**Garment Production Lab-1**

Course Code	FTPC 309
Course Title	Garment Production Lab-1
Number of Credits	1 (L: 0, T: 0, P: 1)
Prerequisites	
Course Category	Programme Corecourse-9

**Course Outcomes: -**

- 1) To gain idea human body proportions.
- 2) Idea about taking measurement techniques.
- 3) Knowledge on principles of fabric layout.
- 4) Gaining idea on selection of fabric , yarns, sewing threads for designer garment preparation.
- 5) Gaining idea about drafting.

**Course Content:-**

1. **Human Figure :** Proportion and disproportion of human figure, figure types and variation—normal

2. **Measurement:** Measurement & its importance - standard body measurement for children, ladies and gents. Sequence of taking body measurement for various age group and sex. Recording of measurement.
3. **Layout:** open layout, lengthwise layout, cross wise layout, double layout, etc. Principles of layout - laying of different patterns on different types of fabrics.
4. Preparation of dress form and draping fabric for various garments.
5. Selection of fibre, yarn, fabrics & finishes for ladies & children garments. Factors affecting selection of ladies & children garments.
6. **Drafting of garments (Ladies & children):**  
 For Children:- drafting of zabra, panty, romper, diaper, easy frock, A-line frock, umbrella frock, askirt & top, tunic.  
 For ladies :- drafting of skirts straight, pleated, umbrella, paneled, drafting of blouses :- High neck, plain, Orabi, coli cut, churidar, salwar, ladies shirt, kameez etc.  
 Cutting & Sewing of all the above drafted ladies & children garments.

### **References: -**

1. Jacob Solinger, “Apparel Manufacturing Handbook”, Van Nostrand Reinhold Company (1980).

### **Summer Internship-I**

Course Code	FTSI-310
Course Title	Summer Internship-I
Number of Credits	2 (L: 0, T: 0, P: 0)
Prerequisites	Nil
Course Category	Internship

Internships may be full-time or part-time; they are full-time in the summer vacation and part-time during the academic session.

Sl. no.	Schedule	Duration	Activities	Credits	Hours of Work
1	Summer Vacation after 2 <sup>nd</sup> Semester	3-4 Weeks	Inter/ Intra Institutional Activities **	2	80 Hours

(\*\* Students are required to be involved in Inter/ Intra Institutional Activities viz; Training with higher Institutions; Soft skill training organized by Training and Placement Cell of the respective Institutions; contribution at incubation/ innovation /entrepreneurship cell of the Institute; participation in conferences/ workshops/ competitions etc.; Learning at Departmental Lab/ Tinkering Lab/ Institutional workshop; Working for consultancy/ research

project within the Institutes and Participation in all the activities of Institute's Innovation Council for e.g.: IPR workshop/Leadership Talks/ Idea/ Design/ Innovation/ Business Completion/ Technical Expos etc.)

**Benefits to Students:**

1. An opportunity to get hired by the Industry/ organization.
2. Practical experience in an organizational setting.
3. Excellent opportunity to see how the theoretical aspects learned in classes are integrated into the practical world. On-floor experience provides much more professional experience which is often worth more than classroom teaching.
4. Helps them decide if the industry and the profession is the best career option to pursue.
5. Opportunity to learn new skills and supplement knowledge.
6. Opportunity to practice communication and teamwork skills.
7. Opportunity to learn strategies like time management, multi-tasking etc. in an industrial setup.
8. Opportunity to meet new people and learn networking skills.
9. Makes a valuable addition to their resume.
10. Enhances their candidacy for higher education.
11. Creating network and social circle and developing relationships with industry people.
12. Provides opportunity to evaluate the organization before committing to a full-time position.

**Course Outcome:-**

After completion of the course, students will be able to:

C.O.1: Explain the real life organizational and industrial environment situations (K2).

C.O.2: Develop organizational dynamics in terms of organizational behaviour, culture and professional ethics (K1).

C.O.3: Understand the importance of Team work (K2).

C.O.4: Explain invaluable knowledge and networking experience (K2).

C.O.5: Develop skill to build a relationship with a prospective employer (K3).

**Course Content:-**

Internships are educational and career development opportunities, providing practical experience in a field or discipline. The Summer Internship-I is a student centric activity that would expose Technical students to the industrial environment, which cannot be simulated in the classroom and hence creating competent professionals for the industry. They are structured, short-term, supervised placements often focused around particular tasks or projects with defined timescales. An internship may be compensated, non-compensated or some time may be paid. The internship has to be meaningful and mutually beneficial to the intern and the organization. It is important that the objectives and the activities of the

internship program are clearly defined and understood. Following are the intended objectives of internship training:

1. Will expose Technical students to the industrial environment, which cannot be simulated in the classroom and hence creating competent professionals for the industry.
2. Provide possible opportunities to learn, understand and sharpen the real time technical / managerial skills required at the job.
3. Exposure to the current technological developments relevant to the subject area of training.
4. Experience gained from the 'Industrial Internship' in classroom will be used in classroom discussions.
5. Create conditions conducive to quest for knowledge and its applicability on the job.
6. Learn to apply the Technical knowledge in real industrial situations.
7. Gain experience in writing Technical reports/projects.
8. Expose students to the engineer's responsibilities and ethics.
9. Familiarize with various materials, processes, products and their applications along with relevant aspects of quality control.
10. Promote academic, professional and/or personal development.
11. Expose the students to future employers.
12. Understand the social, economic and administrative considerations that influence the working environment of industrial organizations
13. Understand the psychology of the workers and their habits, attitudes and approach to problem solving.

**Overall compilation of Internship Activities / Credit Framework:**

Major Head of Activity	Credit	Schedule	Total Duration	Sub Activity Head	Proposed Document as Evidence	Evaluated by	Performance appraisal/ Maximum points/ activity
Inter/ Intra Institutional Activities	2	Summer Vacation after 2 <sup>nd</sup> Semester	3-4 Weeks	Inter/ Intra Institutional Workshop/ Training	Certificate	Programme Head	Satisfactory/ Good/ Excellent
				Working for consultancy/ research project	Certificate	Programme Head	Satisfactory/ Good/ Excellent
				Festival (Technical / Business / Others) Events	Certificate	Programme Head	Satisfactory/ Good/ Excellent
				Contribution in Incubation/ Innovation/ Entrepreneurship Cell/ Institutional Innovation Council	Certificate	Cell In-charge	Satisfactory/ Good/ Excellent
				Learning at Departmental Lab/Tinkering Lab/ Institutional workshop	Certificate	Cell In-charge	Satisfactory/ Good/ Excellent

## **STUDENT'S DIARY/ DAILY LOG**

The main purpose of writing daily diary is to cultivate the habit of documenting and to encourage the students to search for details. It develops the students' thought process and reasoning abilities. The students should record in the daily training diary the day-to-day account of the observations, impressions, information gathered and suggestions given, if any. It should contain the sketches & drawings related to the observations made by the students.

The daily training diary should be signed at the end of each day by the supervisor/ in charge of the section where the student has been working. The diary should also be shown to the Faculty Mentor visiting the industry from time to time and get ratified on the day of his visit.

Student's Diary and Internship Report should be submitted by the students along with attendance record and an evaluation sheet duly signed and stamped by the industry to the Institute immediately after the completion of the training. It will be evaluated on the basis of the following criteria:

- a) Regularity in maintenance of the diary.
- b) Adequacy & quality of information recorded.
- c) Drawings, sketches and data recorded.
- d) Thought process and recording techniques used.
- e) Organization of the information.

## **INTERNSHIP REPORT**

After completion of Internship, the student should prepare a comprehensive report to indicate what he has observed and learnt in the training period. The student may contact Industrial Supervisor/ Faculty Mentor/TPO for assigning special topics and problems and should prepare the final report on the assigned topics. Daily diary will also help to a great extent in writing the industrial report since much of the information has already been incorporated by the student into the daily diary. The training report should be signed by the Internship Supervisor, TPO and Faculty Mentor. The Internship report will be evaluated on the basis of following criteria:

- a) Originality.
- b) Adequacy and purposeful write-up.
- c) Organization, format, drawings, sketches, style, language etc.
- d) Variety and relevance of learning experience.
- e) Practical applications, relationships with basic theory and concepts taught in the course.

Semester IV

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-10	FTPC 401	Basics of Textile Manufacturing-II	2	1	0	3	3
2	Programme core course-11	FTPC 402	Fabric Structure & Textile Testing	2	1	0	3	3
3	Programme core course-12	FTPC 403	Fashion Business Management & Fashion Merchandising	2	0	0	2	2
4	Programme core course-13	FTPC 404	Traditional embroidery & Accessory Design	2	0	0	2	2
5	Programme core course-14	FTPC 405	Garment Production lab-II	0	0	2	2	1
6	Programme core course-15	FTPC 406	Computer Application in fashion lab	0	0	2	2	1
7	Programme elective course-1	FTPE 407	Garment Designing & Draping lab	0	1	4	5	3
8	Humanities & Social Science- 4	HS 408	Professional Skill Development	2	1	0	3	3
9	Minor Project	FTPR 408		0	0	4	4	2
10	Mandatory Course-1	AU410	Essence of Indian Knowledge and Tradition	2	0	0	2	0
			<b>Total</b>	<b>12</b>	<b>4</b>	<b>12</b>	<b>28</b>	<b>20</b>

## **BASICS OF TEXTILE MANUFACTURING –II**

Course Code	FTPC 401
Course Title	BASICS OF TEXTILE MANUFACTURING –II
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme Corecourse-10

### **Course Outcomes: -**

- 1) Knowledge on fabric production using Weaving knitting and Non-Woven
- 2) To gain idea about different techniques used for fabric production using textile yarns.

### **Course Content:-**

#### **Module- 1: Introduction**

Number of class hours: 4 Hours

Suggestive Learning Outcomes: 1) To learn different methods involved in Weaving of cloth.  
2) To gain knowledge on various processes involved in production of fabrics by weaving process.

Introduction to weaving process: Woven fabric formation-weaving preparatory process and objectives of each process with proper sequence.

**Motion:** Looms-brief study of primary motions, secondary motions, and auxiliary motions etc. Passage of yarn in loom, definition of warp and salvage, etc.

#### **Module- 2: Looms**

Number of class hours: 6 hours

Suggestive Learning Outcomes:

- 1) To learn different types of weaving machines and their technical features.
- 2) To gain knowledge on various development in weaving process and their characterises.

Classification of different types of looms, Primitive back strap loom, pit loom, vertical loom, two harness foot loom, power loom, dobby loom, jacquard loom, etc. Advantage and limitations of each type.

Parts of different loom and function of different parts.

#### **Module-3: Advanced technology in Weaving:**

Number of class hours: 6 hours

Suggestive Learning Outcomes:

- 1) To learn different types of advanced weaving techniques and their features.
- 2) To gain knowledge on various shuttle less weaving process and their principal of operations.



Introduction to different types of shuttle less weaving techniques such as Rapier, Projectile, Air jet & Water jet techniques. Principal of all these weaving techniques and their advantage & limitations.

#### **Module-4: Dobby and Jacquard**

Number of class hours: 2 hours

Suggestive Learning Outcomes: 1) Gaining knowledge on concept of design development using Dobby and Jacquard.

2) To learn different types of possible value addition during weaving.

Basic introduction and objective of doobby and its advantage in fabric production.

Concept of jacquard looms & its functions. Classifications of jacquard looms and their advantages and limitations.

Scope of advancement in Jacquard & Dobby technology.

#### **Module-5: Knitting**

Number of class hours: 4hours

Suggestive Learning Outcomes: 1) Gaining idea on the concept of knitting.

2) Knowledge on different knitting process for fabric production.

Introducing to knitting process-knitting definition, classification, comparison of basic properties of woven & knitted fabrics.

Concept of Warp knitting & Weft knitting process, types: circular, flat, and its important features.

Different types of knitting machines: important feature of Flatbed, Tricot, Raschel, Crochet machine.

#### **Module- 5: Non Woven**

Number of class hours: 2 hours

Suggestive Learning Outcomes: 1) To gain idea about Non-woven techniques.

2) Knowledge of non-woven methods and its applications.

Introduction to Nonwovens: sequence of process in manufacturing nonwovens-types of bonding-mechanical, chemical and thermal. Uses of non woven fabrics in different fields.

#### **References: -**

1. Ormerod A an Sondlhelm W.S. Weaving Technology and operations' the textile institute, 1995.

2. Ajgaonkar D.V., Principles of knitting universal Publishing Corporation, 1998.

3. Corbmann. B.P. Textiles: Fibre to fabric Megraw Hill Inc. Singapore, 1986.

4. Spencer D.J. Knitting technology Pergamon Press, Oxford 1982.

## FABRIC STRUCTURE & TEXTILE TESTING

Course Code	FTPC 402
Course Title	FABRIC STRUCTURE & TEXTILE TESTING
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme Corecourse-11

**Course Outcomes:** - 1) To knowledge on fabric structure and methods of testing involved in textiles.

2) To gain idea about different types of fabrics structure and various testing parameter for Woven fabrics and garment.

### **Course Content:-**

#### **Module- 1: Types of weave**

Number of class hours: 6 Hours

Suggestive Learning Outcomes: 1) To knowledge on different fabric weave structure.  
2) Idea of modification of structure using changes in weave.

Study of different types of Weaves Plain, Basket, Rib, Twill, Satin, Honey-comb, etc.

#### **Module- 2: Types of Fabric**

Number of class hours: 4 hours

Suggestive Learning Outcomes:

1) To knowledge on different types of fabric structure.  
2) Idea of characteristics of different structure and scope of modifications using changes in weave

Study of different types of fabrics structure, plain, twill, satin etc. Study texture & characteristics of those fabrics, and their end uses.

#### **Module-3: Identification**

Number of class hours: 2hours

Suggestive Learning Outcomes: 1) Gaining knowledge of different types of fabric structure  
2) Scope of development of fabric structure.

Identification of weaves and fabrics: Plain fabrics, Twill fabrics, Satin fabrics and sateen weave. Construction particulars for like Cambric, Voile, Poplin, Denim, Casement, Canvas, China silk, Cheese-cloth, flannel, Gauge, Buckram-uses of the structure fabric.

#### **Module-4: Testing of yarn**

Number of class hours: 4 hours

Suggestive Learning Outcomes: 1) Gaining idea of Testing of fibres and Yarns and their applications.

2) Learn knowledge of different properties of Fibres & Yarns etc.

Concept of Testing of different physical and chemical properties of fibre & yarn. Such as Tensile Strength of yarn, yarn Count, twist, Evenness of yarn, Classmate and Yarn Hairiness etc.

Study of yarn numbering system-method of count determination-yarn appearance tester-single yarn strength tester-CSP, etc.

#### **Module- 5: Testing of fabric**

Number of class hours: 6 hours

Suggestive Learning Outcomes: 1) To gain idea about different properties of fabric and its concept.

2) Knowledge on various characteristics of fabric properties.

Fabric: Structural Properties: Fabric Count & Crimp.

Fabric Dimensional Properties: Length, width, thickness, shrinkage, strength testing-tensile strength, tearing strength, abrasion testing, pill testing,

Fabric Serviceability Test: Colour fastness testing, washing fastness, light fastness, rubbing fastness and importance of these on garments.

#### **References: -**

1. Booth J.E. Principle of textile testing, Butter Worths, London, 1983.
2. Grosicki Z.J. Watsons Advanced Textile design and colour Newness Butterworths, London, 1975.
3. Watsons Textile design and colour Newness Butterworths, London, 1975.

## **FASHION BUSINESS MANAGEMENT & FASHION MERCHANDISING**

Course Code	FTPC 403
Course Title	FASHION BUSINESS MANAGEMENT & FASHION MERCHANDISING
Number of Credits	2 (L: 2, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-12

**Course Outcomes:** - 1) Knowledge on fashion terminology, business structures.  
2) To gaining knowledge on fashion movements, environmental influences of fashion.  
3) Gaining idea about retail business & patents.  
4) Gaining idea about merchandising and its various roles and responsibilities.  
5) Knowledge on industrial agreements

### **Course Content:-**

#### **Module- 1: Introduction**

Number of class hours: 4 Hours

Suggestive Learning Outcomes: 1) Gaining knowledge on fashion terms.

2) Knowledge on business structure.

Nature of fashion: terminology of fashion: style-design-taste-classic-Fad-components of fashion- Silhouette-details-texture-colour acceptance-change-principles of fashion.

Scope of fashion business-forms of business ownership-business growth and expansion.

#### **Module- 2: Environment of fashion**

Number of class hours: 6 hours

Suggestive Learning Outcomes:

1) Knowledge on fashion aspects with environmental influences.

2) To gaining knowledge on fashion movements.

The environment of fashion: demographics and psychographics-economic factors sociological factors-psychological factors-implications of environmental influences.

The movement of fashion: the cycling of fashion stages of fashion cycle-consumer buying and the fashion cycle-factors influences fashion movement-recurring fashions. The leader of fashion: the designer's role.

### **Module-3: Retailing**

Number of class hours: 4 hours

Suggestive Learning Outcomes: 1) Gaining idea about retail business.  
2) knowledge on patents.

Retailing in fashion merchandising & formation: development of fashion retailing-types of retailer's fashion merchandise-fashion advertising-visual merchandising.

Patent : What is Patent & Importance of patent act, consumer protection, consumer protection act, consumer behaviour, consumer satisfaction & retention.

### **Module-4: Introduction to Fashion Merchandising**

Number of class hours: 4hours

Suggestive Learning Outcomes: 1) Gaining idea about merchandising and its various roles and responsibilities.

2) Knowledge types of market.

Merchandising: definition of merchandising-function of merchandising division-role & responsibility of merchandiser-different types of buyers-communication with the buyers awareness of current market trend-product development-line planning & line presentation.

Types of markets: retail & wholesale strategies for merchandise distribution-retailers marketing plan, labelling & licensing.

### **Module- 5: Roles**

Number of class hours: 2 hours

Suggestive Learning Outcomes: 1) To gain idea about export business roles.  
2) Knowledge on industrial agreements.

Export of garments: Quota, Letter of credit, Commission, Lead time delivery schedule, Time management and delivery schedule. Purchasing, store keeping and inventory control. Introduction to WTO & MFA. Role of WTO & MFA in manufacturing industry.

Responsibility of merchandiser during production, fashion merchandising strategy for success.

### **References: -**

1. Fashion in interdisciplinary review by Hann. M.A. and Jackson K.C.
2. Introduction to clothing management by Chuter. M.J.
3. Fashion design and product development by Darr. H and Bomery J.
4. Fashion from concept to consumer by Gini Stephen Frings.
5. Introduction to fashion merchandising by Evelyn Grace.

## TRADITIONAL EMBROIDERY & ACCESSORY DESIGN

Course Code	FTPC 404
Course Title	TRADITIONAL EMBROIDERY & ACCESSORY DESIGN
Number of Credits	2 (L: 2, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-13

**Course Outcomes:** - 1) Knowledge on tools & equipments used in embroidery.

- 2) To gaining knowledge on different stitches
- 3) Gaining idea about India's state wise embroidery designs
- 4) Gaining idea about Importance of Accessories
- 5) Knowledge on footwear & bags processing.

### **Course Content:-**

#### **Module- 1: Basic embroidery Equipment -**

Number of class hours: 4 Hours

Suggestive Learning Outcomes:

1) Gaining knowledge on tools & equipments used in embroidery.

2) Knowledge on tracing methods.

Introduction to embroidery equipment for hand embroidery such as needle, frame, scissors, carbon paper, tracing paper, etc. Study of modern embroidery equipment. Transferring design on fabric by carbon paper, rubbing method, tracing table method, pressing method, pound method etc.

#### **Module- 2: Study of Basic Stitches**

Number of class hours: 4 hours

Suggestive Learning Outcomes:

1) Knowledge on different stitches.

2) To gaining knowledge on surface ornamentation works on fabric..

Study of basic stitches: Lazy Daizy, Chain, Satin stitch, Herring bone, Feather, Long and Short, French knot, etc. Study of embroidery stitches □ Patch work, Mirror work, Cross, Beading, Fly feather, Romanian, Applique and Smocking.

#### **Module-3: Indian Textile Study**

Number of class hours: 6 hours

Suggestive Learning Outcomes: 1) Gaining idea about India's state wise embroidery designs.

2) knowledge on different traditional saree.

Study of Traditional embroidery : Phulkari, Kutch & Kathiawar embroideries, Kasida of Kashmir, Chikankari of Lucknow, Kantha of Bengal, Gold & Silver embroidery, Bead work,

Cut work and Open work, Kasauti of Karnataka, Manipuri embroidery. Study of traditional Indian textiles such as Baluchari, Jamdani, Ikkat, Benarasi, Kanchipuram, etc.

#### **Module-4: Importance of Accessories**

Number of class hours: 4hours

Suggestive Learning Outcomes: 1) Gaining idea about Importance of Accessories  
2) Knowledge on different types of jewellery.

Importance of Accessories, Type of Accessories, etc. Study of various factors affecting selection of accessories- occasion, material, style, utility, sizes, colour, personality, etc.

Jewellery: Study of manufacturing processes and designing of different types of jewellery such as necklace, neckband, earrings, etc.

#### **Module- 5: Study of Footwear, bags:**

Number of class hours: 2 hours

Suggestive Learning Outcomes: 1) To gain idea about footwear..  
2) Knowledge on bags.

Study and manufacturing process of footwear, Properties and Characteristics footwear. Designing and making of footwear, application of colour & finishes of footwear.

Study and manufacturing process of different types of bags, Designing of bags, Shapes, Cuts, Handle, etc

#### **References: -**

1. Inside fashion design, Sharon Lee Tata
2. Beyond the looking glass: Americas beauty culture, Perutz Caterine, William Morrow and Co.
3. Indian Embroideries by Kamala Devi Chattopadhyay.
4. Learning to Embroidery by Pevell Publications INC New York.
5. Directory of Embroidery stitches by Thomas

## **GARMENT PRODUCTION-II LAB**

Course Code	FTPC 405
Course Title	GARMENT PRODUCTION-II LAB
Number of Credits	1 (L: 0, T: 0, P: 1)
Prerequisites	
Course Category	Programme Corecourse-14

- Course Outcomes: -**
- 1) To learn about basic garments construction techniques.
  - 2) Idea about fullness of garment manufacturing.
  - 3) Knowledge on different types of collar constructions.
  - 4) Gaining idea about fashion forecasting of different designs.
  - 5) Gaining idea about drafting process.

### **Course Content:-**

8. Garment construction: Stitches - constructing stitches - temporary and permanent stitches. Seams - definition, types and seam finishes, their suitability and application in various garments.
9. Study of Fullness: definition, methods of introducing fullness in garments, gathers, pleats, flares, tucks & darts, methods of controlling fullness.
10. Factors to be considered in designing collars.
11. Study on Future of children, ladies and gents garments-Growth of apparel industry for children, ladies and gents-Role of fashion- colour, fabric, texture of ladies, children and gents garments.
12. Drafting of men's garments such as Shirts, Trousers, Pyjama, Kurta, Jackets, Full sleeve shirt, Bush shirt and T-shirt, etc.
13. Cutting and stitching of all the drafted men's garments.

### **References: -**

1. Jacob Solinger, "Apparel Manufacturing Handbook", Van Nostrand Reinhold Company .
2. Dress selection and design, Harion Hillhouse.
3. Visual design, Goldstein and Goldstein.
4. Art in everyday life, M.F. Hepbirth / Eng. Uni. Press. Ltd.
5. Dress Designing, J.R. Garbth.
6. How to draw Human Figures, Sharan Lee Tata, Mona.
7. Complete Book of fashion Illustration Shafer Eduardis Hepper and Raw

## **COMPUTER APPLICATION IN FASHION LAB**

Course Code	FTPC 406
Course Title	COMPUTER APPLICATION IN FASHION LAB
Number of Credits	1 (L: 0, T: 0, P: 1)
Prerequisites	
Course Category	Programme Corecourse-15

- Course Outcomes: -**
- 1) To learn about basic learning process in computer application.
  - 2) Idea about spreadsheets, row, columns, forms, worksheets.
  - 3) Knowledge on different types of collar construction
  - 4) Gaining idea about designing software.
  - 5) Gaining idea about AutoCAD



### **Course Content:-**

1. Learning Process : Simple work processing-learning to use differential size & types of fonts, line spacing, tables, inserting pictures, editing-cut & paste.
2. Formula : Spread sheet processing-formulae for row-column charts, different forms, worksheets-row header & column header.
3. Corel Draw & Photoshop : Corel Draw- Garment Designing, Styling, Alteration, Colouring, Erasing, Painting, etc. Photoshop practices.
4. Auto cad Auto CAD worksheets: Drawing aids and utility commands, entities, text, layers, inquiry, display, editing, block and assembly, scripts.

### **References: -**

- 1) CAD in clothing and textiles a Collection of expert views by Aldrich. W.
- 2) Computers in fashion industry by Taylor P.
- 3) Photoshop 4 Complete by Binder, BPB Publication.
- 4) Photoshop 4 studio skills. By Moniz, BPB Publication.
- 5) Teach yours Photoshop 4 by Richards, BPB Publications.

## **GARMENT DESIGNING & DRAPING LAB**

Course Code	FTPC 407
Course Title	GARMENT DESIGNING & DRAPING LAB
Number of Credits	3 (L: 0, T: 1, P: 2)
Prerequisites	
Course Category	Programme Elective course-1

### **Course Outcomes: -**

- 1) To learn about importance of draping, basic principles of draping.
- 2) Idea about basic blocks sketching and preparation of basic blocks.
- 3) Knowledge on dart construction process.
- 4) Gaining idea about designing and Preparation of Basic cuts on bodice block
- 5) Gaining idea about Gathers, Pleats, Cowls and Drapes.

### **Course Content:-**

1. Definition and importance of draping, basic principles of draping.
2. Study of basic blocks sketching and preparation of basic blocks for men, women and children.
3. Study on Dart & different types of Darts.
4. Study and practice of Dart manipulation.
5. Preparation of Basic cuts on bodice block- Princess lines, yokes, necklines, closings.
6. Study of Gathers, Pleats, Cowls and Drapes.

**References: -**

1. Dress design draping and flat pattern by Hillhouse and Mansfield.
2. Dress pattern designing by Natalie Bray.
3. Drapery of fashion design by Filde Jeffe, Norie Relas.
4. Draping by Reston Publishing Co., Virginia.

**Professional Skill Development**

Course Code	:	HS 408
Course Title	:	Professional Skill Development (Theory)
Number of Credits	:	3 (L: 2, T: 1, P:0)
Prerequisites	:	NIL
Course Category	:	HS

**Course Outcomes:**

After successful completion of this course, students would be able to:

**CO1:** Understand the importance of soft skills and personality in a person's career growth.

K2

**CO2:** Communicate uprightly while looking for a job. K3

**CO3:** Learn and utilize the key skills while facing job interview. K2 & K3

**CO4:** Demonstrate effective writing skills for professional excellence. K2

**CO5:** Explore ways to make oral communications interesting and captivating. K3

**Unit – 1 Soft Skills & Personality Development**

**Number of Class Hours: 06**

**Marks: 08**

**Learning Outcomes:**

- 1) Get acquainted with the details of soft skills and the importance of personality K1

- 2) Understand the importance of communication skills in developing one's personality.  
K2
- 3) Understand the importance of soft skills and personality in a person's career growth  
K2

**Detailed Content:**

1. **Soft skills - Demand of Every Employer:** How soft skills complement hard skills, Soft skills as competitive weapon, Classification of soft skills into personal and interpersonal traits, Soft skills needed for career growth- Time management, Leadership traits, Communication and networking skills, Teamwork and Interpersonal skills, Empathy and Listening skills, Responsibility, Attitude, Ethics, Integrity, Values and Trust.
2. **Personality Development – A must for career Growth:** Grooming one's personality as a signal that others read, mapping different personality types – Perfectionists, Helpers, Achievers, Romantics, Observers, Questioners, Enthusiasts or adventurers, Bosses or asserters, Mediators or peacemakers.

### **Unit – 2 Looking for a Job**

**Number of Class Hours: 05**

**Marks: 08**

**Learning Outcomes:**

- 1) Learn to write Job Applications, Cover Letter, Resume, Curriculum Vitae, bio data  
K2
- 2) Develop interpersonal skills/ soft skills through Group Discussion. K3

**Detailed Content**

1. Job Application : Job Application Letters in response to advertisements, Self-application letters for Jobs
2. Curriculum Vitae/Resume: Formats of Resume and CV for a fresher and for someone with experience, Differences between Resume, CV, Bio-data, and choice of referees.
3. Group Discussion : A test of soft skills

### **Unit – 3 Job Interviews**

**Number of Class Hours: 05**

**Marks: 08**

**Learning Outcomes:**

- 1) Understand the importance of Job interviews in the selection procedure K2
- 2) Comprehend and Adapt to various types, stages and processes of job interviews  
K1&K3
- 3) Demonstrate appropriate body language in interviews K3

## Detailed Content

1. Job Interviews: Definition, processes of Interviews, Types of Interviews
2. Stages in Job interviews: Before interview stage, On D' Day, After interview stage.
3. Importance of Body language in Interviews: : Facing an interview, Using proper verbal and non- verbal cues, the perfect handshake ,Exhibiting confidence, the business etiquettes to maintain, body language ,and dress code - what to speak, how to speak in an interview and answer interview questions, negative body language, handling an awkward situation in an interview.
4. Probable interview questions and answers.
5. Mock interviews to be conducted by mock interview boards.

### Unit – 4 Enhancing Writing skills

**Number of Class Hours: 12**

**Marks: 08**

#### **Learning Outcomes:**

- 1) Write dialogues on given topics / situations K3
- 2) Express facts & ideas effectively in written form K3
- 3) Learn to write formal and informal letters & emails. K2

## Detailed Content

- 1) **Art of Condensation:** Principles to increase clarity of written communication.
- 2) **Dialogue Writing:** Meeting and Parting, Introducing and Influencing, Requests, Agreeing and Disagreeing, Inquiries and Information.
- 3) **Letter Writing:** Placing an order, Letter to Inquiry, Letter of Complaint, Letter seeking permission.
- 4) **E- mail writing:** writing the perfect e-mail, steps to the perfect e-mail, formal and informal greetings, requests through an e-mail, writing an apology, complaint and seeking help and information in an e-mail, informing about a file attached in an email, writing the formal ending of an e-mail.

### Unit – 5 Conversations, Panel Discussion and Public Speaking

**Number of Class Hours: 12**

**Marks: 08**

#### **Learning Outcomes:**

1. Speak persuasively on a given topic fluently and clearly. K3
2. Participate in formal and informal conversations. K3
3. Express ideas and views on given topics. K3

## Detailed Content

- 1) **Conversation & Dialogue Practice:**
  - a) Introducing oneself

- b) Introduction about family
- c) Discussion about the weather
- d) Seeking Permission to do something
- e) Seeking Information at Railway Station/ Airport
- f) Taking Appointments from superiors and industry personnel
- g) Conversation with the Cashier- College/ bank
- h) Discussing holiday plans
- i) Asking about products in a shopping mall
- j) Talking over the Telephone

2) **Panel Discussion:** Act of a moderator - ways to respond to audience questions.  
Suggested topics: Current Affairs

3) **Public Speaking:** Art of Persuasion, Making speeches interesting, Delivering different types of speeches: Ceremonial, Demonstrative, Informative, Persuasive.

#### **List of Software/Learning Websites**

1. <http://www.free-english-study.com/>
2. <http://www.english-online.org.uk/course.htm>
3. <http://www.english-online.org.uk/>
4. <http://www.talkenglish.com/>
5. <http://www.learnenglish.de/>

#### **Reference Books:**

(Name of Authors/ Title of the Book /Edition /Name of the Publisher)

- 1) Sanjay Kumar & PushpLata Communications Skills , 2<sup>nd</sup> Edition, Oxford University Press
- 2) Meenakshi Raman & Sangeeta Sharma Technical Communication: Principles & Practice Oxford University Press
- 3) M. Raman & S. Sharma Technical Communication Oxford University Press
- 4) Barun Kumar Mitra, Personality Development and Soft Skills Oxford University Press

## **Minor Project**

Course Code	CEPR-409
Course Title	Minor Project
Number of Credits	2 (L: 0, T: 0, P: 4)
Prerequisites	Nil
Course Category	Project Work (PR)

### **Course Outcome:-**

After completion of the course, students will be able to:

C.O.1: Demonstrate a thorough and systematic understanding of project contents (K2).

C.O. 2: Identify the methodologies and professional way of documentation and communication (K3).

C.O. 3: Illustrate the key stages in development of the project (K2).

C.O. 4: Develop the skill of working in a Team (K3).

C.O. 5: Apply the idea of mini project for developing systematic work plan in major project (K3).

### **Course Content:-**

The minor project topic should be selected / chosen to ensure the satisfaction of the urgent need to establish a direct link between education, national development and productivity and thus reduce the gap between the world of work and the world of study. The course should have the following-

- 1) Perform detailed study about various components of a project.
- 2) Study about methodologies and professional way of documentation and communication related to project work.
- 3) Develop idea about problem formulation.
- 4) Knowledge of how to organize, scope, plan, do and act within a project thesis.
- 5) Familiarity with specific tools (i.e. hardware equipment and software) relevant to the project selected.
- 6) Demonstrate the implementation of a minor project work.

# Essence of Indian Knowledge and Tradition

Course Code	AU 410
Course Title	Essence of Indian Knowledge and Tradition
Number of Credits	0
Prerequisites	NA
Course Category	Audit

## Course Outcomes: -

After completion of the course the students will be able to-

CO 1: Understand the essence of Indian tradition and the importance of carrying them forward. (K<sub>2</sub>)

CO 2: Understand the Vedic literature and important ideas discussed in the Vedas. (K<sub>2</sub>)

CO 3: Describe scientific heritage of ancient India along with comprehending its relevance and application in various modern scientific disciplines. (K<sub>1</sub>)

CO 4: Relate the theoretical and practical sides of the science of Yoga and Aurveda with modern knowledge systems. (K<sub>1</sub>)

CO 5: Explain the worth of Indian intellectual heritage, traditional practices and Indian lifestyle from scientific lenses. (K<sub>4</sub>)

## Module- 1

**Name of the Module:** Introduction to Vedic Literature

Number of class hours: **05**

Content:

- General structure of Vedic Literature,
- Different theories on the age of the Vedas,
- Educational system in the Vedic times
- subject-matter of Ṛgveda-samhitā, *Sāmaveda -Samhitā*, *Yajurveda-Samhitā*, *Atharvaveda-Samhitā*, *Brāhmaṇa* and *Āraṇyaka* literature, Upaveda

Learning outcomes of the Module

1	Describe the Vedic literature (K1)
2	Outline the heritage of ancient India specially the scientific knowledge that is embedded in the Vedas will be shown through this module (K2)

## Module- 2

**Name of the Unit:** Fundamental doctrines of the *Upaniṣads*

Number of class hours:**05**

Content:

- General introduction of Upaniṣadic literature
- Philosophical ideas and ethics in Upaniṣadas

Learning outcomes of the Module

1.	Understand Upaniṣads and its significance as the perennial source Indian philosophy (K2)
2.	Explain the scientific temperament, knowledge and methods of scientific enquiry that is embedded in the Upaniṣadas (K2)

## Module- 3

**Name of the Unit:** *Vedāṅgas*, Purāṇas and Dharmasāstra Literature

Number of class hours:**05**

Content:

- Introduction to Vedāṅga Literature
- History of Sanskrit Grammar
- An Overview of Purāṇic literature
- History of Dharmasāstra

Learning outcomes of the Module

1.	Describe various scientific and academic disciplines of ancient India along with scientific knowledge that is rooted in the Puranic literature (K1)
2.	Remember ancient system of Law and Governance in a nutshell especially the principles and philosophy behind the ancient constitutions (K1)

## Module- 4

**Name of the Module:** Introduction to Indian Philosophical Systems, Scientific aspects of Indian knowledge systems

Number of class hours:**05**

Content:

- General introduction to Indian Philosophical systems, i.e. Orthodox and Heterodox
- Glimpse of ancient Indian Science and technology.



### Learning outcomes of the Module

1.	Describe the Indian Philosophical systems and their relevance and application in modern scientific enquiry (K1)
2.	Remember the various scientific methods, means and validity of knowledge as discussed in these systems, methods of discussion, debate and systemic learning as structured in ancient Indian knowledge literature (K1)

## Module- 5

**Name of the Unit:** Introduction to Yoga & Āyurveda

Number of class hours:**05**

Content:

- General ideas about Yoga,
- Origin and Development of Pātañjala Yoga,
- Origin and Development of Āyurveda and its relevance

### Learning outcomes of the Module

1.	Understand about principles and philosophy of Yogic sciences and Āyurveda. (K2)
2.	Identify various ancient texts, practices of Yoga and Āyurveda along with gaining basic practical and theoretical knowledge which they will be able to relate with modern healthcare systems (K4)

### References: -

- 1) Capra, Fritjof. *The Tao of Physics*. New York: Harpercollins, 2007.
- 2) Capra, Fritjof. *The Web of Life*. London: Harpar Collins Publishers, 1996.
- 3) Dasgupta, Surendranath & De, Sushil Kumar. *A History of Sanskrit Literature*. Delhi: Motilal Banarsidass, 2017.
- 4) Dasgupta, Surendranath. *A History of Indian Philosophy*. Delhi: Motilal Banarsidass, 1991.
- 5) Gonda, Jan. *A History of Vedic Literature*. Delhi: Monohar Publishers and Distributors, 2020.
- 6) Jha, R.N. *Science and Consciousness Psychotherapy and Yoga Practices*. Delhi: Vidyanidhi Prakashan, 2016.
- 7) Kane. P.V. *History of Dharmasastra*, Poona: Bhandarkar Oriental Research Institute, 1930.
- 8) Max Muller. *Ancient Sanskrit Literature*, London: Spottiswoode and Co., 1859.
- 9) *Pride of India*, New Delhi: Samskrita Bharati, 2006.
- 10) Shastri, Gourinath. *A History of Vedic Literature*, Kolkata: Sanskrit Pustak Bhandar, 2006.
- 11) Sinha, Jadunath. *Indian Philosophy*. Delhi: Motilal Banarsidass, 1938.
- 12) Wujastyk, Dominik. *The Roots of Ayurveda*. India: Penguin India, 2000.

**Semester V**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-16	FTPC 501	Textile Dyeing & Printing	2	1	0	3	3
2	Programme core course-17	FTPC 502	Fashion Communication & Consumer Behaviour in Fashion	2	0	0	2	2
3	Programme core course-18	FTPC 503	Textile Testing lab	0	1	2	3	2
4	Programme core course-19	FTPC 504	Textile Dyeing & Printing lab	0	0	2	2	1
5	Programme core course-20	FTPC 505	Computer Aided Fashion Design Lab	0	0	2	2	1
6	Programme elective course-2 (Any one to be selected)	FTPE 506/A	Home Textile	2	1	0	3	3
		FTPE 506/B	Clothing Technology					
7	Programme elective course-3	FTPE 507	Advance Pattern Making Lab	0	1	4	5	3
8	Open elective course-1	(Any one to be selected from Annexure-I)		3	0	0	3	3
9	Summer Internship-II (6 weeks) after IV Semester	FTSI 509		0	0	0	0	3
10	Major Project	FTPR 510		0	0	2	2	1
			<b>Total</b>	<b>6</b>	<b>4</b>	<b>12</b>	<b>22</b>	<b>22</b>

## Textile Dyeing & Printing

Course Code	FTPC 501
Course Title	Textile Dyeing & Printing
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme Corecourse-16

### **Course Outcomes: -**

- 1) Knowledge On preparatory process of dyeing
- 2) Idea about different bleaching process.
  - 3) Knowledge on different dyes used for different fibres.
  - 4) Knowledge on various different dyeing process.
  - 5) Learn about different methods and styles of printing and after treatment of printing.

### **Course Content:-**

#### **Module- 1: Bleaching**

**Number of class hours: 2 hours.**

#### **Suggestive Learning Outcomes:**

- 4) To learn about preparatory process of dyeing.
- 5) To gain idea about different bleaching process.

Preparatory process involved in Cotton dyeing-Singeing, Scouring, bleaching, De-sizing, Souring etc. Objectives of each process and their outcomes.

Introduction to bleaching-

type of bleaching, bleaching with hypochlorides and peroxide, mercerizing-method of mercerizing for yarn and fabric.

#### **Module- 2: Classification of Dyes**

**Number of class hours: 2 Hours**

#### **Suggestive Learning Outcomes:**

- 1) To learn about different dyes used for different fibres.
- 2) To gain idea about their fastness properties.

Dyeing of textile: different types of dye used for cellulosic, protein and synthetic fibres, their fastness properties, classification of dyes.

### **Module-3:Dyeing**

**Number of class hours: 4 Hours**

**Suggestive Learning Outcomes:** 1) Gaining knowledge on different dyeing process.  
2) Learn about Tie dye and bandhni.

Study of dyeing process/methods on various textile materials such as cellulosic fibre with reactive and vat dyes, dyeing of protein fibre with acid and basic dyes, dyeing of synthetic fibre with acid, cationic and dispersed dyes, Tie & Dye and Bandhni.

### **Module-4 : Knowledge of Printing**

**Number of class hours: 3 Hours**

**Suggestive Learning Outcomes:**

- 1) Gaining knowledge on basics of printing.
- 2) Learn about different methods and styles of printing.

Printing of textiles, difference between dyeing and printing, methods and styles of printing, .

### **Module- 5: Printing**

**Number of class hours: 5 Hours**

**Suggestive Learning Outcomes:**

- 1) Gaining knowledge on different printing process.
- 2) Learn about after treatment process of printing.

study of various printing process-

Block printing, Screen printing, Roller printing, Rotary printing, Flock printing, Fusing, Transfer printing- steaming and curing.

### **References: -**

1. Shenai V.A. Technology of textile processing Vol. III, V, VII & VIII Shevak Publications 1981.

2.

K.V., Vaidya A.A. Chemical Processing of synthetic fibres and blends John Wiley & Sons, New York, 1984.

3. R.H. textile chemistry Vol. I & II textile institute, Manchester 1970.

## Fashion Communication & Consumer Behavior in Fashion

Course Code	FTPC 502
Course Title	Fashion Communication & Consumer Behavior in Fashion
Number of Credits	2 (L: 2, T: 0, P: 0)
Prerequisites	
Course Category	Programme Corecourse-17

### **Course Outcomes: -**

- 1) To learn about fashion adaptation.
  - 2) Idea about fashion communication process.
  - 3) Preparation idea on visual communication.
  - 4) Gaining idea about fashion events.
  - 5) Knowledge on various purpose of clothing

### **Course Content:-**

#### **Module- 1: Fashion and the communication process**

**Number of class hours: 2Hours**

**Suggestive Learning Outcomes:** 1) Knowledge on fashion adaptation.  
2) To learn about need of fashion communication process.

Introduction of fashion, the theories of fashion adaptation, need for promotion of fashion, need for communication process.

#### **Module- 2: Visual Communication**

**Number of class hours: 4hours**

**Suggestive Learning Outcomes:** 1) Knowledge on visual merchandising.  
2) Idea about different types of window display.  
3) Preparation idea on fashion shows

V.M. meaning and display meaning, role and importance of visual merchandising, types of window display, fashion shows and fashion photography.

#### **Module-3: Written communication and fashion event**

**Number of class hours: 3hours**

**Suggestive Learning Outcomes:** 1) Learning about fashion media and advertising.  
2) Knowledge on fashion events.

Creative writing in fashion media and advertising. Communication of the fashion event – catalogues, brochures, layouts for exhibition.

#### **Module-4: Understanding and purpose of clothing**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) Gaining idea about fashion trends in clothing  
2) Knowledge on fashion culture

Social and psychological aspects of fashion, protection, modesty and attraction. Clothing according to climate condition, clothing culture, ornamentation.

#### **Module- 5: Selection of clothes**

Number of class hours: 2hours

**Suggestive Learning Outcomes:** 1) To gain idea about selection of clothes  
2) Knowledge on various materials for different clothes.

Clothes for children, middle age, adults, types of clothes according to human figure, different materials for different clothes.

#### **References: -**

1. Fashion and color by Mary Garthe.
2. History of fashion by Manmeet sodhia.

### Textile Testing Lab

Course Code	FTPC 503
Course Title	Textile Testing lab
Number of Credits	2 (L: 0, T: 1, P: 2)
Prerequisites	
Course Category	Programme Corecourse-18

#### **Course Outcomes: -**

- 1) To learn about the concept of textile testing-Physical & Chemical.
- 2) To learn about selections of samples for testing.
- 3) Idea about the yarn numbering system.
- 4) Knowledge on different features of textile materials.
- 5) Gaining idea about quality control process.
- 6) Gaining idea about different checking systems.

#### **Course Content:-**

1. **Introduction to textile testing:** Brief concept of textile testing-Physical & Chemical testing. selections of samples for testing, random and biased samples.

2. **Properties of fibre** - fibre length, fibre strength, fibre fineness, fibre maturity & Count, Strength, & yarn etc.
3. **Properties of yarn:** **Count**-to determines count by Beesley balance, electric balance. **Strength**- yarn strength, breaking strength, elongation, tenacity, twist , yarn fineness etc.
4. **Properties of fabric:** Dimensional properties, length, breadth, thickness. Other physical parameters such as Warp and weft thread count of fabric , tensile strength testing , Abrasion testing, drapability , Pill test, fabric cover factor etc.
5. **Quality control:** knowledge on quality control chart. 4point and 10 point system. Concept of Neps, thin place, thick place and other quality parameter for testing of textiles.

**References:**

1. Principles of textile testing by J.E Booth
  2. Textile testing by skinle
3. Testing and quality management by V.K Kothari.

## Textile Dyeing & Printing lab

Course Code	FTPC 504
Course Title	Textile Testing lab
Number of Credits	1 (L: 0, T: 0, P: 2)
Prerequisites	
Course Category	Programme Corecourse-19

**Course Outcomes:** - 1) 1) To learn about various preparatory process involved in textile processing- Scouring, desizing & bleaching process.

- 2) Idea about different types dyes.
- 3) Knowledge on different natural dyes.
- 4) Gaining idea about printing process.
- 5) Gaining idea about tie and dye.

**Course Content:-**

1. **Scouring, desizing**- of cotton materials using different methods and compare result.
2. **Bleaching** -Practice of bleaching of cotton, yarn or cloth using hydrogen peroxide, bleaching powder and compare the result.
3. **Dyeing** - Practice of dyeing of cotton, silk, wool, Nylon & Polyester -yarn and fabrics using different dyes and their mechanism. Prepare different shade cards for record purpose.
4. **Natural Dyeing** -Practice of natural dyes by natural ingredients.

5. **Printing** – Brief on ingredients used in printing and role of each particles. Preparing of printing paste. Practice of Printing using, Block, Screen Printing, batik printing technique, tie & dye etc.

**References:**

1. Fundamental of textiles and care by sushila DhanTyagi
2. ChemicalProcessingofsyntheticfibreandblendsbyDatyaK.V.andVaidyaA.A.

## Computer Aided Fashion Design Lab

Course Code	FTPC 505
Course Title	Computer Aided Fashion Design Lab
Number of Credits	1 (L: 0, T: 0, P: 2)
Prerequisites	
Course Category	Programme Corecourse-20

- Course Outcomes:** -
- 1) To learn about fashion softwares.
  - 2) Idea about Auto-Cad
  - 3) Knowledge on different logo /label makings.
  - 4) Gaining idea about floral and geometrical motifs.
  - 5) Gaining idea about colour wheel.

**Course Content:-**

**1.CorelDraw&Photoshop:**

CorelDraw-  
GarmentDesigning,Styling,Alteration,Coloring,Erasing,Painting,etc.Photoshoppractice  
s.

**2.Autocad :**Auto CAD worksheets: Drawing aids and utility  
commands,entities,text,layers,inquiry,display,editing,blockandassembly,scripts.

**3.BrochureDesigning:**

Brochuredesigning-logo/label,brochuresfordesignandwindowdisplayforfashionstore.

**4. Colour and Motifs**

Traditional, floral and geometrical motifs.  
Create design by changing texture and colour combination.

**5. Create colour wheel :** using fashion software.

**References:**

1. CAD in clothing and textiles a Collection of expert views by Aldrich.W.
2. Computers in fashion industry by TaylorP.
3. Photoshop4CompletebyBinder,BPBPpublication.
4. Photoshop4studioskills.ByMoniz,BPBPpublication.



# Clothing Technology

Course Code	FTPE 506/B
Course Title	Clothing Technology
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme elective course-2

- Course Outcomes:** -1) To learn about marker planning, spreading techniques.  
2) Idea about cutting techniques and cutting machines.  
3) Preparation idea on sewing technology.  
4) Gaining idea about fusing and pressing techniques.  
5) Knowledge on quality control system.

## **Course Content:-**

### **Module- 1: Marker Planning**

**Number of class hours: 2Hours**

#### **Suggestive Learning Outcomes:**

- 1) Knowledge on marker planning.
  - 2) Idea about different laying plans, spreading techniques and machines.
- Study of marker planning and types of marker planning technique.  
Study of laying plan, types of spreading techniques and study of spreading machine

### **Module- 2: Cutting**

**Number of class hours: 3hours**

- Suggestive Learning Outcomes:** 1) Knowledge on various types of cutting techniques.  
2) Idea about different garment cutting machines.

Technologyofcutting-Introduction,studyofvarioustypesofcuttingtechniquesand cuttingmachine.

### **Module-3:Sewing Technology**

**Number of class hours: 4hours**

- Suggestive Learning Outcomes:** 1) Learning about seams and stitches .  
2) Knowledge on different parts of sewing machines and feeding mechanism of sewing machines.

Introductiontosewing,seams,stitches.Stu  
dyofsewingneedlesandsewingthreads.

Introductionofsewingmachineandtheirparts,accessoriesofsewingmachineandfeedingmechani  
smof sewing machine.

#### **Module-4: Fusing & Pressing Techniques**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) Gaining idea about different fusing process.

2) Knowledge on alternative joining of fabrics/garments

Introduction of fusing, Introduction of pressing

Study of alternative joining of fabrics/garments

#### **Module- 5: Quality and cost control in apparel industry**

Number of class hours: 4hours

**Suggestive Learning Outcomes:** 1) To gain idea about quality control in garment industry.

2) Knowledge on costing and specification sheets of garment industry.

Introduction of quality control in apparel industry

Study of costing of garments in apparel industry

Study of specification sheets of apparel in apparel industry

#### **References: -**

1. Introduction to clothing management by Chuter M.J.

2. The technology of clothing manufacture by Carr. Hand Latham Barbara

### **Advance Pattern Making Lab**

Course Code	FTPE 507
Course Title	Advance Pattern Making Lab
Number of Credits	3 (L: 0, T: 1, P: 4)
Prerequisites	
Course Category	Programme elective course-3

**Course Outcomes: -** 1) To learn about industrial pattern making process.

2) Idea about features of children, men's and women dress patterns.

3) Knowledge on grading systems.

4) Gaining idea about paper pattern for modern westerns wears, traditional costumes.

#### **Course Content:-**

1. Introduction to Advanced pattern making/Industrial pattern making.

2. Study of Style features in children, ladies & men's wear.

3. Preparation of layouts for children, ladies, men's wear of fabric of different width.

4. Estimation-dimension & calculation of cloth estimation for various dresses.

5. Grading practice of paper patterns for children, women, and men's wear.

6. Preparation of paper pattern for party wears, nightwear, traditional costume, skirt, blouses, pyjamas, sportswear, etc.

## References:

1. Dresspatterndesigning,NatalieBray.
2. PatternDrafting,CrossetandDunlop.
3. Introductiontopatterncutting,gradingandmodeling,M.GoulBourn.
4. Modernpatterndesign.
5. Flatpatternmethods,HallerN.

## **Fashion Illustration**

Course Code	FTOE-508
Course Title	Fashion Illustration
Number of Credits	3 (L: 3, T: 0, P: 0)
Prerequisites	
Course Category	Open elective course-1

- Course Outcomes:** -1) To learn about basic drawing techniques..  
2) Idea about human anatomy structure.  
3) Knowledge on sketching of different garment parts.  
4) Gaining idea about various costume drawings. .  
5) Gaining idea about colour wheels and selection of colours..

### **Module- 1: Introduction to Fashion Illustration**

**Number of class hours: 2 hours.**

#### **Suggestive Learning Outcomes:**

- 1) To learn about preparatory process of sketching.
- 2) To gain idea about different colours .

Changes in fashion Illustration styles and proportion over the centuries .  
Introduction to various colourmediums-  
postercolour,watercolour,crayons,waterproofing,pencil&pens.Differenttypes of prints  
andtheir affects when draftinto dresses-  
plain,striped,checks,textured,floralillustrationwithpencilandcolour.

### **Module- 2: Basic gesture drawing**

**Number of class hours: 2 Hours**

#### **Suggestive Learning Outcomes:**

- 1) To learn about different figure poses
- 2) To gain idea about human body and its parts.

Make stick figures in different poses, Make geometric figures, Blocking the human body and studying the different body parts in details.

### **Module-3:Proportion**

**Number of class hours: 4 Hours**

**Suggestive Learning Outcomes:** 1) Gaining knowledge on different techniques of illustration.

2) Learn about faces , hair styles, accessory designs

Study of types and techniques of illustrations

Study of Basic Anatomy.

Constant proportions – children, men, women in various poses.

Drawing faces and hair styles, Drawing arms and legs with accessories, creating various poses.

### **Module-4 :Illustration Fashionfigure**

**Number of class hours: 3 Hours**

**Suggestive Learning Outcomes:**

1) Gaining knowledge on colour figures.

2) Learn about different methods of garment design

Illustrate in

colour figures with dresses in different types of fabric, illustrated dresses for children, women and men

What is design? How to design? Presentation technique-

Flat sketches, Portfolio. Garment design details for children, women and men.

### **Module- 5: Drawing**

**Number of class hours: 5 Hours**

**Suggestive Learning Outcomes:**

1) Gaining knowledge on silhouette.

2) Learn about different types of garment parts

Silhouette and its type.

Drawing & study of different types of necklines, collars, sleeves and cuffs, drawing skirt, pants and coats.

Drawing blouses, shirts.

### **References: -**

1. Dress selection and design, Harion Hillhouse.
2. Visual design, Goldstein and Goldstein.
3. Art in everyday life, M.F. Hepbirth / Eng. Uni. Press. Ltd.
4. Dress Designing, J.R. Garbth.
5. How to draw Human Figures, Sharan Lee Tata, Mona.
6. Complete Book of fashion Illustration Shafer Eduardis Hepper and Raw.

## Summer Internship-II

Course Code	FTSI-509
Course Title	Summer Internship-II
Number of Credits	3 (L: 0, T: 0, P: 0)
Prerequisites	Fundamental and basic practical skills of relevant discipline/programme
Course Category	Internship

Internships may be full-time or part-time; they are full-time in the summer vacation and part-time during the academic session.

Sl. no.	Schedule	Duration	Activities	Credits	Hours of Work
1	Summer Vacation after 4 <sup>th</sup> Semester	6 Weeks	Industrial/Govt./NGO/MSME/ Rural Internship/Innovation / Entrepreneurship <sup>##</sup>	3	120 Hours

(<sup>##</sup>During the summer vacation after 4<sup>th</sup> Semester, students are ready for industrial experience. Therefore, they may choose to undergo Internship /Innovation /Entrepreneurship related activities. Students may choose either to work on innovation or entrepreneurial activities resulting in start-up or undergo internship with industry/ NGO's/ Government organizations/ Micro/ Small/ Medium enterprises to make themselves ready for the industry. In case a student want to pursue his/herfamily business and don't want to undergo internship, a declaration by a parent may be submitted directly to the TPO.)

### **Course Outcome: -**

After completion of the course, students will be able to:

C.O.1: Describe a better understanding of the engineering / technological workplace(K2).

C.O.2: Develop and demonstrate workplace competencies necessary for professional and academic success (K2).

C.O.3: Classify career preferences and professional goals (K3).

C.O.4: Develop preliminary portfolio including work samples from the internship (K2).

C.O.5: Increase competitiveness for full-time engineering employment / start-up (K3).

### **Course Content:-**

Internships are educational and career development opportunities, providing practical experience in a field or discipline. The Summer Internship-II is a student centric activity that would expose Technical students to the industrial environment, which cannot be simulated in the classroom and hence creating competent professionals for the industry. They are structured, short-term, supervised placements often focused around particular tasks or projects with defined timescales. An internship may be compensated, non-compensated or some time may be paid. The internship has to be meaningful and mutually beneficial to the intern and the organization. It is important that the objectives and the activities of the internship program are clearly defined and understood. Following are the intended objectives of internship training:

1. Will expose Technical students to the industrial environment, which cannot be simulated in the classroom and hence creating competent professionals for the industry.
2. Provide possible opportunities to learn, understand and sharpen the real time technical / managerial skills required at the job.
3. Exposure to the current technological developments relevant to the subject area of training.
4. Experience gained from the 'Industrial Internship' in classroom will be used in classroom discussions.
5. Create conditions conducive to quest for knowledge and its applicability on the job.
6. Learn to apply the Technical knowledge in real industrial situations.
7. Gain experience in writing Technical reports/projects.
8. Expose students to the engineer's responsibilities and ethics.
9. Familiarize with various materials, processes, products and their applications along with relevant aspects of quality control.
10. Promote academic, professional and/or personal development.
11. Expose the students to future employers.
12. Understand the social, economic and administrative considerations that influence the working environment of industrial organizations
13. Understand the psychology of the workers and their habits, attitudes and approach to problem solving.

**Overall compilation of Internship Activities / Credit Framework:**

Major Head of Activity	Credit	Schedule	Total Duration	Sub Activity Head	Proposed Document as Evidence	Evaluated by	Performance appraisal/ Maximum points/ activity
Innovation / IPR / Entrepreneurship	3	Summer Vacation after 4 <sup>th</sup> Semester	6 Weeks	Participation in innovation related completions for eg. Hackathons etc.	Certificate	Faculty Mentor	Satisfactory/ Good/ Excellent
				Development of new product/ Business Plan/ registration of start-up	Certificate	Programme Head	Satisfactory/ Good/ Excellent
				Participation in all the activities of Institute's Innovation Council for eg: IPR workshop/ Leadership Talks/ Idea/ Design/ Innovation/ Business Completion/ Technical Expos etc.	Certificate	President/ Convener of ICC	Satisfactory/ Good/ Excellent
				Work experience at family business	Declaration by Parent	TPO	Satisfactory/ Good/ Excellent
Internship	3	Summer Vacation after 4 <sup>th</sup> Semester	6 Weeks	(Internship with Industry/ Govt. / NGO/ PSU/ Any Micro/ Small/ Medium enterprise/ Online Internship	Evaluating Report	Faculty Mentor/ TPO/ Industry supervisor	Satisfactory/ Good/ Excellent
Rural Internship	3	Summer Vacation after 4 <sup>th</sup> Semester	6 Weeks	Long Term goals under rural Internship	Evaluating Report	Faculty Mentor/ TPO/ NSS/ NCC head	Satisfactory/ Good/ Excellent

## STUDENT'S DIARY/ DAILY LOG

The main purpose of writing daily diary is to cultivate the habit of documenting and to encourage the students to search for details. It develops the students' thought process and reasoning abilities. The students should record in the daily training diary the day-to-day account of the observations, impressions, information gathered and suggestions given, if any. It should contain the sketches & drawings related to the observations made by the students.

The daily training diary should be signed at the end of each day by the supervisor/ in charge of the section where the student has been working. The diary should also be shown to the Faculty Mentor visiting the industry from time to time and get ratified on the day of his visit.

Student's Diary and Internship Report should be submitted by the students along with attendance record and an evaluation sheet duly signed and stamped by the industry to the Institute immediately after the completion of the training. It will be evaluated on the basis of the following criteria:

- a) Regularity in maintenance of the diary.
- b) Adequacy & quality of information recorded.
- c) Drawings, sketches and data recorded.
- d) Thought process and recording techniques used.
- e) Organization of the information.

## INTERNSHIP REPORT

After completion of Internship, the student should prepare a comprehensive report to indicate what he has observed and learnt in the training period. The student may contact Industrial Supervisor/ Faculty Mentor/TPO for assigning special topics and problems and should prepare the final report on the assigned topics. Daily diary will also help to a great extent in writing the industrial report since much of the information has already been incorporated by the student into the daily diary. The training report should be signed by the Internship Supervisor, TPO and Faculty Mentor. The Internship report will be evaluated on the basis of following criteria:

- a) Originality.
- b) Adequacy and purposeful write-up.
- c) Organization, format, drawings, sketches, style, language etc.
- d) Variety and relevance of learning experience.
- e) Practical applications, relationships with basic theory and concepts taught in the course.

## Major Project - I

Course Code	FTPR-510
Course Title	Minor Project
Number of Credits	1 (L: 0, T: 0, P: 2)
Prerequisites	Nil
Course Category	Project Work (PR)

### Course Outcome:-

After completion of the course, students will be able to:

C.O. 1: Demonstrate a sound technical knowledge of their selected project topic and the knowledge, skills and attitudes of a professional engineer (K2).

C.O. 2: Develop the skill of working in a Team (K3).

C.O. 3: Design engineering solutions to complex problems utilising a systems approach (K6).

C.O. 4: Design the solution of an engineering project involving latest tools and techniques (K6).

C.O. 5: Develop the skill of effective communication with engineers and the community at large in written and oral forms. (K3)

### **Course Content:-**

The major project topic should be selected / chosen to ensure the satisfaction of the urgent need to establish a direct link between education, national development and productivity and thus reduce the gap between the world of work and the world of study. The course should have the following-

- 1) Develop sound knowledge about the domain of the project work.
- 2) Perform detailed study about various components of a project.
- 3) Learn to be an important member of a team for successful execution of a project work.
- 4) Study about methodologies and professional way of documentation and communication related to project work.
- 5) Develop idea about problem formulation, finding the solution of a complex engineering problem.
- 6) Develop project report as per the suggested format to communicate the findings of the project work.
- 7) Acquire the skill of effective oral communication to the fellow engineers and people in the society at large.
- 8) Knowledge of how to organize, scope, plan, do and act within a project thesis.
- 9) Familiarity with specific tools (i.e. hardware equipment and software) relevant to the project selected.
- 10) Demonstrate the implementation of a major project work.



**Semester VI**

Sl. No.	Category	Code No.	Course Title	Hours per week			Total Contact Hrs/Week	Credit
				L	T	P		
1	Programme core course-21	FTPC 601	Textile Finishing	2	1	0	3	3
2	Programme core course-22	FTPC 602	Sewing Technology or Fashion Research	1	1	0	2	2
3	Programme elective course-4	FTPE 603	Apparel Production & Quality Control	2	1	0	3	3
4	Humanities and Social Science course	HSS 604	Entrepreneurship and Start-up's	3	1	0	4	4
5	Open elective-2	FTOE-605	Anyone to be selected from Annexure-II	4	0	0	4	4
6	Mandatory Course-2	AU 605	Indian Constitution	2	0	0	2	0
7	Major Project-II	FTPR-607	Major Project-II	0	0	6	6	3
8	Seminar	FTSE-608	Seminar	2	0	0	2	1
			<b>Total</b>	<b>16</b>	<b>4</b>	<b>6</b>	<b>26</b>	<b>20</b>

# Textile Finishing

Course Code	FTPC 601
Course Title	Textile Finishing
Number of Credits	3 (L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme core course-21

**Course Outcomes:** -1) To learn about different types of finishing.

- 2) Idea about mercerization
- 3) Preparation idea chemical and physical finishing
- 4) Gaining idea about natural dyes
- 5) Knowledge on banned dyes.

**Course Content:-**

## **Module- 1: Introduction of textile finishes**

**Number of class hours: 2Hours**

**Suggestive Learning Outcomes:**

- 1) Knowledge on different types of finishing.
- 2) Idea about necessities of finishing.

Classification of textile finishes, Necessities of finishing, uses of silicon in textile finishes .

## **Module- 2: Physical and Chemical Finishes**

**Number of class hours: 3hours**

Suggestive Learning Outcomes: 1) Knowledge on various types mercerization  
2) Idea about different physical and chemical finishing.

Mercerization-object-fabric mercerization-durable/washfinishbyresin,sanforisationprocess-calendaring-napping-shrinking-creaseresistance-embossing.

## **Module-3:GarmentFinishing**

**Number of class hours: 4hours**

**Suggestive Learning Outcomes:** 1) Learning about different wash on fabrics.  
2) Knowledge on crinkle effect on fabrics and different uncommon denims.

Chemicals&enzymes,crinkleaffect,softening,acidwash,stonewash,etc. different types of uncommon denims.

#### **Module-4: Different types of finishes**

**Number of class hours: 3hours**

**Suggestive Learning Outcomes:** 1) Gaining idea about different finishing process

2) Knowledge on heat set on fabrics.

Calendaring, resin finish, chlorination of wool fabrics, heat set, flame retardant finish, Mothproof finish, antistatic finish, antiseptic finish, water proof finish etc.

#### **Module- 5: NaturalDye**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) To gain idea about natural dye

2) Knowledge on banned dyes.

Naturaldyes:History,backgroundandapplication,awarenessofbanneddyesandchemicals-Germanban.

#### **References: -**

1. Finishersandenvironmentsolutions,textileinstitute,Manchester.
2. Harrison.P(Editor),GarmentDyeingReadytowearfashionfrom thedyehosue,thetextileinstitute,UK.
3. MarshJ.T.Anintroductiontotextilefinishing.
4. Shenai.V.A.technology oftextilefinishingSevakPublications,Bombay.

## Fashion Research

Course Code	FTPC 602
Course Title	Textile Finishing
Number of Credits	2 (L: 1, T: 1, P: 0)
Prerequisites	
Course Category	Programme core course-22

**Course Outcomes: -**1) To learn about importance of research in textiles and clothing

2) Idea about the types of tools applicable to research problems.

3) Gaining idea for developing skills of research work.

4) Learning about fashion statics

5) Knowledge on various steps involves in research.

#### **Course Content:-**

#### **Module- 1: Nature and significance of Research**

**Number of class hours: 2Hours**

**Suggestive Learning Outcomes:**

1) Knowledge on research process

2) Idea about research techniques.

Research process, research problems, review of literature and report writing.

**Module- 2: Research paper**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) Knowledge on research paper.  
2) Idea about preparation of research paper.

Layout of research paper, Meaning of research paper, preparation of study paper.

**Module-3:Introduction of Statistics Fashion**

**Number of class hours: 4hours**

**Suggestive Learning Outcomes:** 1) Learning about fashion statics  
2) Knowledge on fashion cycle

Importance and scope of fashion statics, Functions and Limitation measures, case study of any fashion cycle.

**Module-4: Survey Research**

**Number of class hours: 3hours**

**Suggestive Learning Outcomes:** 1) Gaining idea about marker research  
2) Knowledge on fashion forecasting.

Marketing research, Fashion Forecasting, preference study.

**Module- 5: Creation of New Product**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) To gain idea about different types of fabrics  
2) Knowledge on various steps involves in research.

Study of different types of fabrics, yarns, fibres and steps involved in research.

**References: -**

1. Research Methodology, Dr. Mahesh Kulkarni, Nirali Prakashan
2. Foundation of Research
3. Concept to Consumer.

# Apparel Production & Quality Control

Course Code	FTPE 603
Course Title	Apparel Production & Quality Control
Number of Credits	3(L: 2, T: 1, P: 0)
Prerequisites	
Course Category	Programme elective course-4

- Course Outcomes:** -1) To learn about importance of garment construction  
2) Idea about different garment parts.  
3) Gaining idea for developing fashionable value addition  
5) Knowledge on quality control for garment industry

## **Course Content:-**

### **Module- 1: Garment Construction**

**Number of class hours: 3Hours**

#### **Suggestive Learning Outcomes:**

- 1) Knowledge on techniques of garment construction.
- 2) Idea about different stitches

Stitches classification, Seams: definition, types of seams and seam finishes. Hem finish, Gathers, Pleats, Frill, Flounces, tucks and darts, methods of controlling fullness.

### **Module- 2: Neck Finishes & Collars**

**Number of class hours: 3hours**

- Suggestive Learning Outcomes:** 1) Knowledge on different neck finishes.  
2) Idea about preparation of collars.

Definition neck finishes, facing, binding, fitted facing, Factors to be considered in designing collars, classification of collars, Ripped collar, Chinese collar, full roll collar, partial roll collar, square collar, shirt collar etc.

### **Module-3: Pockets, Yokes, Plackets, Skirts & Sleeves**

**Number of class hours: 4hours**

- Suggestive Learning Outcomes:** 1) Learning about different garment parts  
2) Knowledge on fashion value addition

Selection of pockets design, Construction of pockets, Classifications of pocket, creating variety of yoke design, preparation of yokes, types of yokes, types of plackets, construction idea of plackets, construction of skirts and different types of skirt.

#### **Module-4: Production planning and control**

**Number of class hours: 3hours**

**Suggestive Learning Outcomes:** 1) Gaining idea about garment industry process

2) Knowledge on controlling parameters.

Control parameters, planning and lead time, capacity calculation for cutting, sewing and finishing, determination of machine requirements for new factory, line balancing, determination and allocation of manpower.

#### **Module- 5: Quality in product development**

**Number of class hours: 2hours**

**Suggestive Learning Outcomes:** 1) To gain idea about quality levels

2) Knowledge on controlling time and cost

Quality assurance during product development, methods to avoid problems during pattern making, garment construction and other areas , work study in garment industry, methods of controlling time and cost.

#### **References: -**

1. Introduction to clothing production management by A.J. Chuter
2. Materials Management in clothing production by Dvid .J.Tailor.
3. Concept to Consumer.

## **Entrepreneurship and Start-ups**

Course Code	:	HSS 604
Course Title	:	Entrepreneurship and Start-ups
Number of Credits	:	4(L: 3, T: 1, P: 0)
Prerequisites (Course code)	:	
Course Category	:	Humanities and social science course -5

#### **Course Learning Objectives:**

- CO1 Understand the basic concepts of Entrepreneurship and Startups.
- CO2 Illustrate skills of discovering business ideas, visualizing and planning a business.
- CO3 Analyze market and business risk for strategy development.
- CO4 Demonstrate skills of organizational management.
- CO5 Exhibit knowledge of financing methods, institutions and skills for communication of ideas.

## **Course Content:**

### **Unit1-Introduction and Basics of Entrepreneurship and Start-Ups**

#### **Suggestive Learning Outcomes:**

- (1) Describe the Basic Elements of Entrepreneur and Entrepreneurship
- (2) Distinguish between Entrepreneur, Manager and Intrapreneur

#### **Content:**

- Definitions, Traits of an entrepreneur, Factors influencing entrepreneurship, Types and Functions of Entrepreneurs, Need for promotion of entrepreneurship, Intrapreneur, Motivation
- Role of Entrepreneurs in Economic Development
- Similarities/differences between - Entrepreneur and Manager, Entrepreneur and Intrapreneur.

### **Unit2–Business Ideas and their implementation**

#### **Suggestive Learning Outcomes:**

- (1) Illustrate different Types of Business Planning and Business Structure
- (2) Select specific Institutions Assisting Entrepreneur

#### **Content:**

- Discovering ideas
- Visualizing the business
- Business Plan, - Types of planning, Importance of planning, Steps in planning
- Types of Business Structures
- Institutions assisting entrepreneur

### **Unit3–Idea to Start-up**

#### **Suggestive Learning Outcomes:**

- (1) Identify Steps for Starting a SSI
- (2) Predict the Target Market and Associated Risk

#### **Content:**

- Market analysis – Identifying the target market
- Competition evaluation and Strategy Development
- Steps for starting a small enterprise

- Risk analysis

#### **Unit4–Management of Enterprise**

##### **Suggestive Learning Outcomes:**

- (1) Apply the Basic Accounting Concepts in Business
- (2) Demonstrate Knowledge of Pricing, Positioning and Advertising of Products

##### **Content:**

- Recruitment and management of talent.
- Determinants of Price, Pricing methods in practice.
- Market Positioning, Advertising and Sales Promotion
- Accounting - Understanding basics of Transaction, Journal, Ledger, Cashbook, Trial Balance, Cost Sheet and Final Accounts through simple problems

#### **Unit5-Financing and Communication of Ideas**

##### **Suggestive Learning Outcomes:**

- (1) Exhibit Knowledge of various Financial Institutions and Financing Methods
- (2) Illustrate Business Ideas through Communication Skills

##### **Content:**

- Financial Institutions
- Financing methods available for start-ups in India
- Communication of Ideas to potential investors–Investor Pitch

#### **SUGGESTED LEARNING RESOURCES:**

<b>S.No.</b>	<b>Title of Book</b>	<b>Author</b>	<b>Publication</b>
1.	The Startup Owner’s Manual: The Step-by-Step Guide for Building a Great Company	Steve Blank and Bob Dorf	K & S Ranch ISBN–978-0984999392
2.	The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses	Eric Ries	Penguin UK ISBN–978-0670921607



3.	Demand: Creating What People Love Before They Know They Want It	Adrian J. Slywotzky with Karl Weber	Headline Book Publishing ISBN-978-0755388974
4.	Entrepreneurship	Alpana Trehan	Dreamtech Press ISBN: 978-93-5004-026-3
5	Marketing and Sales Management	D C Kapoor	S Chand and Company Ltd. ISBN: 81-219-2430-8
<b>S.No.</b>	<b>Title of Book</b>	<b>Author</b>	<b>Publication</b>
6	Business Economics	H L Ahuja	S Chand and Company Ltd. ISBN: 81-219-1791-3
7	Financial Accounting (Principles and Practice)	Jawahar Lal & Seema Srivastava	S Chand Publishing
8	Accounting for Management	N.P. Srinivasan & Sakthivel Murugan	S Chand Publishing
9	Marketing	Harsh V Verma and Ekta Duggal	Oxford University Press ISBN: 0-19-945910-X
10	Marketing (Asian Edition)	Paul Baines, Chris Fill, Kelly Page and Piyush K. Sinha	Oxford University Press
11	Entrepreneurship	Rajeev Roy	Oxford University Press ISBN: 0-19-807263-5
12	Entrepreneurship Development	Kumar S Anil	New Age Publishers
13	Human Resource Management	Uday Kumar Haldar and Juthika Sarkar	Oxford University Press
14	Fundamentals of Entrepreneurship	S K Mohanty	Prentice Hall of India Private Limited ISBN: 81-203-2867-1
15	Entrepreneurship Development	S S khanka	S Chand and Company Ltd. ISBN: 81-219-1801-4

## SUGGESTED SOFTWARE/LEARNING WEBSITES:

- a. <https://www.fundable.com/learn/resources/guides/startup>
- b. <https://corporatefinanceinstitute.com/resources/knowledge/finance/corporate-structure/>
- c. <https://www.finder.com/small-business-finance-tips>
- d. <https://www.profitbooks.net/funding-options-to-raise-startup-capital-for-your-business/>

## Indian Constitution

Course Code	:	AU- 606
Course Title	:	Indian Constitution
Number of Credits	:	0 (L: 2, T:0; P:0)
Prerequisites (Course code)	:	None
Course Category	:	AU

### Course Outcomes:

CO1. Illustrate Preamble, Basic Structure, Fundamental Rights and Duties of Indian Constitution(K3).

CO2. Discuss the Structure of The Indian Union Government(K2).

CO3. Memorize the Role and Power of Governor, Chief Minister and Council of Ministers and explain the role of State Secretariat (K2).

CO4. Describe the role of Local Administration (K2).

CO5. Explain the Role and Functioning of Election Commission (K2).

### Detailed Course Content:

#### **Unit 1 – The Constitution – Introduction**

Number of Class hours:06

Learning Outcomes:

1. Describe the History of the Making of the Indian Constitution (K2)
2. Illustrate Preamble and the Basic Structure of Indian Constitution (K3)
3. Illustrate the Fundamental Rights and Duties set by Indian Constitution(K3)

**Detailed content of the unit:**

1. The History of the Making of the Indian Constitution
2. Preamble and the Basic Structure, and its interpretation
3. Fundamental Rights and Duties and their interpretation
4. State Policy Principles

**Unit 2 – Union Government**

Number of Class hours:06

Learning Outcomes:

1. Discuss the Structure of the Indian Union Government (K2).
2. Memorize the Role and Power of President, Prime Minister and Council of Ministers of India (K1)
3. Explain the role of Lok Sabha and Rajya Sabha (K2)

**Detailed content of the unit:**

1. Structure of the Indian Union
2. President – Role and Power
3. Prime Minister and Council of Ministers
4. Lok Sabha and Rajya Sabha

**Unit 3 – State Government**

Number of Class hours:06

Learning Outcomes:

1. Memorize the Role and Power of Governor, Chief Minister and Council of Ministers of a state (K1)
2. Explain the role of State Secretariat (K2)

**Detailed content of the unit:**

1. Governor – Role and Power
2. Chief Minister and Council of Ministers
3. State Secretariat

**Unit 4 – Local Administration**

Number of Class hours:06

Learning Outcomes:

1. Describe the role of District Administration (K2)
2. Explain the role of Municipal Corporation (K2)
3. Discuss the role of Zila Panchayat (K2)

**Detailed content of the unit:**

1. District Administration
2. Municipal Corporation
3. Zila Panchayat

## Unit 5 – Election Commission

Number of Class hours:06

Learning Outcomes:

1. Explain the Role and Functioning of Election Commission (K2)
2. Classify the role and functioning of Chief Election Commissioner and State Election Commissioner (K2).

### Detailed content of the unit:

1. Role and Functioning of Election commission
2. Chief Election Commissioner
3. State Election Commission

### Suggested Learning Resources:

S. No.	Title of Book	Author	Publication
1.	Ethics and Politics of the Indian Constitution	Rajeev Bhargava	Oxford University Press, New Delhi, 2008
2.	The Constitution of India	B.L. Fadia	Sahitya Bhawan; New edition (2017)
3.	Introduction to the Constitution of India	DD Basu	Lexis Nexis; Twenty-Third 2018 edition

### Suggested Software/Learning Websites:

- a. <https://www.constitution.org/cons/india/const.html>
- b. <http://www.legislative.gov.in/constitution-of-india>
- c. <https://www.sci.gov.in/constitution>
- d. <https://www.toppr.com/guides/civics/the-indian-constitution/the-constitution-of-india/>

## Major Project - II

Course Code	FTPR-607
Course Title	Major Project
Number of Credits	3 (L: 0, T: 0, P: 6)
Prerequisites	Nil
Course Category	Project Work (PR)

### **Course Outcome:-**

After completion of the course, students will be able to:

C.O. 1: Demonstrate a sound technical knowledge of their selected project topic and the knowledge, skills and attitudes of a professional engineer (K2).

C.O. 2: Develop the skill of working in a Team (K3).

C.O. 3: Design engineering solutions to complex problems utilising a systems approach (K6).

C.O. 4: Design the solution of an engineering project involving latest tools and techniques (K6).

C.O. 5: Develop the skill of effective communication with engineers and the community at large in written and oral forms (K3).

### **Course Content:-**

The major project topic should be selected / chosen to ensure the satisfaction of the urgent need to establish a direct link between education, national development and productivity and thus reduce the gap between the world of work and the world of study. The course should provide the scope to develop the following by the students-

- 1) Develop sound knowledge about the domain of the project work.
- 2) Perform detailed study about various components of a project.
- 3) Learn to be an important member of a team for successful execution of a project work.
- 4) Study about methodologies and professional way of documentation and communication related to project work.
- 5) Develop idea about problem formulation, finding the solution of a complex engineering problem.
- 6) Develop project report as per the suggested format to communicate the findings of the project work.
- 7) Acquire the skill of effective oral communication to the fellow engineers and people in the society at large.
- 8) Knowledge of how to organize, scope, plan, do and act within a project thesis.
- 9) Familiarity with specific tools (i.e. hardware equipment and software) relevant to the project selected.
- 10) Demonstrate the implementation of a major project work.

## Seminar

Course Code	ARSE608
Course Title	Seminar
Number of Credits	1 (L:2, T:0, P:0)
Prerequisites	Nil
Course Category	Seminar presentation

### **Course Outcome:-**

After completion of the course, students will be able to:

C.O.1: Demonstrate a thorough and systematic understanding of a seminar topic (K2).

C.O. 2: Identify the methodologies and professional way of documentation and communication (K3).

C.O.3: Demonstrate the ability to construct a report consistent with expectations of the topic, including an appropriate organization, style, voice, and tone (K3).

C.O.4: Develop the ability to follow discussions, oral arguments, and presentations, noting main points or evidence and tracking through different comments given by the audience (K3).

C.O.5: Develop the communication skill as a speaker (K3).

### **Course Content:-**

The seminar topics may be any aspect of the science and technology, entrepreneurship or any contemporary social issues to be solved by specific branch of engineering and technology (For example, Water logging problems in a particular city may be a seminar topic for Civil Engineering Students) must be approved by the instructor in advance.

The course should have the following-

- 7) Practice speaking in front of a scientific audience.
- 8) Explore topics in detail.
- 9) Research topics and organize presentations.
- 10) To improve as speakers, each student will receive feedback from the fellow students and the instructor.
- 11) PowerPoint, Key Note or overheads are acceptable media for Visual aids. Visual aids should look professional and be readable in the entire room; use spell check and proofread for typographical errors.
- 12) Students have to submit a hard copy contains detailed outline (4-5 pages) of their presentation and also a brief abstract (one or two paragraphs; **250 words max.**) describing their presentation.
- 13) Each student will give 20-minute presentations followed by 3 minutes of question-answer session.

### **Proposal Seminar Format for Students:**

- Introduce yourself.
- Give an introduction and background information on your topic. What relevant research has been performed previously?
- State the problem(s) that remain unanswered.
- Clearly state your objectives and give the specific hypotheses you wish to test.

- Describe the methodology you will use to test your hypotheses. Be sure you fully understand your chosen methods. Give reasons why you chose these methods over other approaches.
- Present any data you have collected thus far.
- Describe what remains to be done, and what you expect to find.
- Explain the significance of your findings (or potential future findings).

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