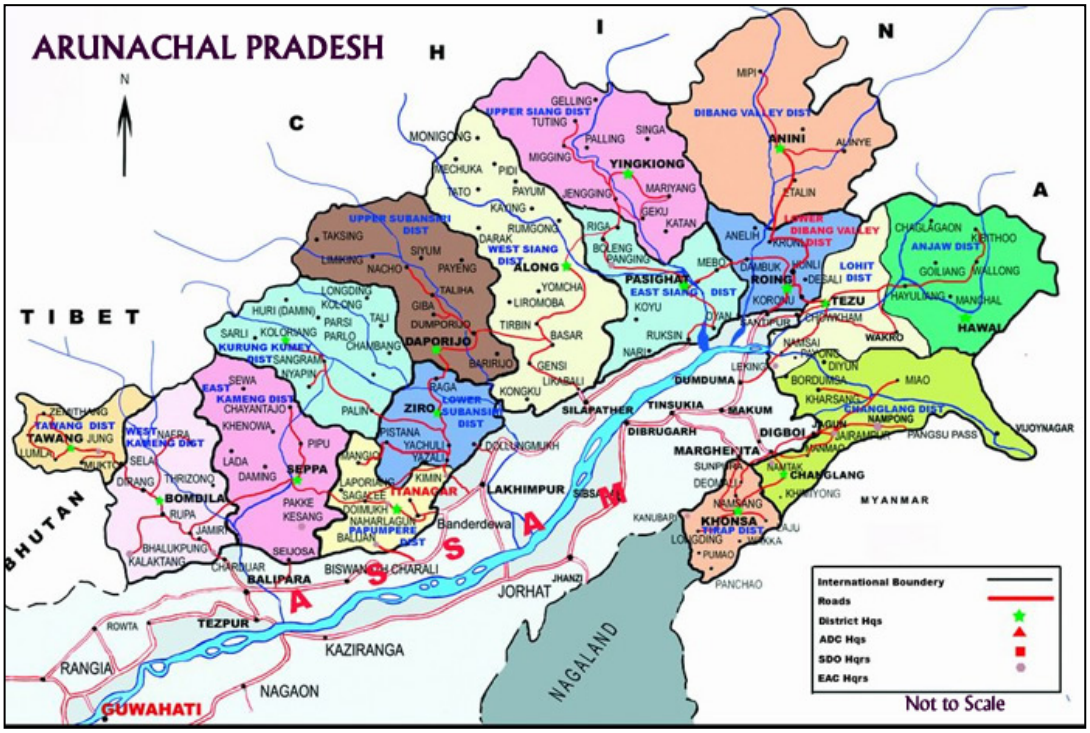
February 2013

REVISED CURRICULUM OF

GARMENT AND FASHION TECHNOLOGY DIPLOMA PROGRAMME

IN

MULTI POINT ENTRY & CREDIT SYSTEM



For the State of Arunachal Pradesh

National Institute of Technical Teachers' Training & Research
Block – FC, Sector – III, Salt Lake City, Kolkata – 700 106
http://www.nitttrkol.ac.in

REVISED CURRICULUM OF

GARMENT AND FASHION TECHNOLOGY DIPLOMA PROGRAMME

IN MULTI POINT ENTRY & CREDIT SYSTEM

NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH
Block – FC, Sector – III, Salt Lake City, Kolkata – 700106

February 2013

Foreword

Government of Arunachal Pradesh has entrusted NITTTR, Kolkata for revising the existing course curricula in eight subject areas and for developing the new course curricula in the two areas.

Revised Course Curricula:

1. Herbal Technology
2. Garment and Fashion Technology
3. Hotel Management and Catering Technology
4. Travel and Tourism Management
5. Electrical and Electronics Engineering
6. Civil Engineering
7. Computer Science and Engineering
8. Automobile Engineering

New Course Curricula:

1. Electronics and Communication Engineering
2. Electrical Engineering
3. Mechanical Engineering

The Institute conducted a series of workshop involving experts in different subject areas for development of the course curricula. An effort has also been made to ensure that the revised course curricula do not deviate significantly from the existing course curricula and at the same time reflect the recent trends in a particular subject area.

The Institute welcomes any meaningful suggestions which can be incorporated in the final versions of the above said document.

Sd/-
(Prof. S. K. Bhattacharyya)
Director
NITTTR, Kolkata

Table of Contents

Scheme of Studies and Evaluation (MPECS) for Diploma in Garment and Fashion Technology

1. FOUNDATION COURSES:

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment*		Sessional	Viva		
1	G101	Communication Skill-I		3	0	0	75	10	15	0	0	0	100	3
2	G102	Communication Skill-II	G101	2	1	2	50	0	0	25	25	0	100	4
3	GFT101+	Mathematics		3	1	0	75	10	15	0	0	0	100	4
4	GFT102	Value and ethics in Profession		3	0	0	75	10	15	0	0	0	100	3
5	GFT103#	Physics		3	0	2	75	10	15	25	25	0	150	4
6	GFT104	History of Fashions		3	1	0	75	10	15	0	0	0	100	4
7	GFT105$	Chemistry		3	0	2	75	10	15	25	25	0	150	4
8	GFT106	Basic Garment design	GFT 104	3	1	2	75	10	15	25	25	0	150	5
9	GFT107	Introduction to Textile		2	1	2	50	0	0	25	25	0	100	4
10	G109	NCC I/NSS I		0	0	2	0	0	0	25	25	0	50	1
11	G110	NCC II/NSS II		0	0	2	0	0	0	25	25	0	50	1
TOTAL				**25**	**05**	**14**	**625**	**70**	**105**	**175**	**175**	**0**	**1150**	**37**

***The marks for assignment (15) should include five (5) marks for attendance.**

+Study scheme and Evaluation scheme of GFT101 will be same as that of G103.

#Study scheme and Evaluation scheme of GFT103 will be same as that of G105.

$Study scheme and Evaluation scheme of GFT105 will be same as that of G107.

2. HARD CORE COURSES:

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
12	GFT201	Drafting & Layout-I		0	1	4	0	0	0	50	50	0	100	3
13	GFT202	Drafting & Layout-II	GFT201	0	1	4	0	0	0	50	50	0	100	3
14	GFT203	Machine Tools & Equipment		3	1	4	75	10	15	50	50	0	200	6
15	GFT204	Elements of Design		3	0	0	75	10	15	0	0	0	100	3
16	G206B	Introduction to Information Technology		2	1	2	50	0	0	25	25	0	100	4
17	GFT205	Basic Garment Fabrication		2	1	2	50	0	0	25	25	0	100	4
18	GFT206	Material Studies		2	1	2	50	0	0	25	25	0	100	4
TOTAL				**12**	**06**	**18**	**300**	**20**	**30**	**225**	**225**	**0**	**800**	**27**

3. SOFT CORE COURSES: ***(Two to be taken, G301 is compulsory and any one from the rest)***

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
19	G301	Environmental Education		3	0	0	75	10	15	0	0	0	100	3
20	G302B	Principles of Management		3	0	0	75	10	15	0	0	0	100	3
21	G302D	Organizational Behaviour		3	0	0	75	10	15	0	0	0	100	3
22	GFT301*	Marketing Management		3	0	0	75	10	15	0	0	0	100	3
23	GFT302	Intellectual Property Right		3	0	0	75	10	15	0	0	0	100	3
TOTAL				**6**	**0**	**0**	**150**	**20**	**30**	**0**	**0**	**0**	**200**	**6**

***Study scheme and Evaluation scheme of GFT301 will be same as that of HT302.**

4. BASIC TECHNOLOGY COURSES:

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
24	GFT401	Style reading, pattern making & Adaptation		2	1	4	50	0	0	50	50	0	150	5
25	GFT402	Surface ornamentation techniques		2	1	4	50	0	0	50	50	0	150	5
26	GFT403	CAD in Fashion Technology		2	1	4	50	0	0	50	50	0	150	5
27	GFT404	Fashion Illustration		3	1	4	75	10	15	50	50	0	200	6
28	GFT405	Drafting, Cutting & Stitching (men)		0	1	4	0	0	0	50	50	0	100	3
29	GFT406	Drafting, Cutting & Stitching (children)		0	1	4	0	0	0	50	50	0	100	3
30	GFT407	Drafting, Cutting & Stitching (women)		0	1	4	0	0	0	50	50	0	100	3
31	GFT408	Draping		0	1	4	0	0	0	50	50	0	100	3
32	GFT409	Product development & fashion forecasting		2	1	2	50	0	0	25	25	0	100	4
33	GFT410	Fabric Formation Technique		2	1	4	50	0	0	50	50	0	150	5
TOTAL				**13**	**10**	**38**	**325**	**10**	**15**	**475**	**475**	**0**	**1300**	**42**

5. APPLIED TECHNOLOGY COURSES:

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
34	GFT501*	Entrepreneurship Development		3	0	0	75	10	15	0	0	0	100	3
35	GFT502	Apparel Quality Assurance		2	1	4	50	0	0	50	50	0	150	5
36	GFT503	Historical Costumes of India		3	1	0	75	10	15	0	0	0	100	4
37	GFT504	Creative Dyeing and Printing		0	1	4	0	0	0	50	50	0	100	3
38	GFT505	Portfolio development		0	0	12	0	0	0	100	100	0	200	6
39	GFT506	Fashion Merchandising		3	1	4	75	10	15	50	50	0	200	6
40	GFT507	Seminar		0	0	6	0	0	0	50	50	0	100	3
41	GFT508	Project		0	0	12	0	0	0	150	50	0	200	6
42	GFT509	Industrial Training		-	-	-	-	-	-	100	100	0	200	10
TOTAL				**21**	**07**	**26**	**525**	**70**	**105**	**450**	**350**	**0**	**1350**	**46**

*** Study scheme and Evaluation scheme of GFT501 will be same as that of G302C.**

6. ELECTIVE COURSES: (*Any TWO to be taken*)

Sl. No	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam	Progressive Assessment		End Exam	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
43	GFT601	Traditional hand embroidery & machine embroidery		3	1	4	75	10	15	50	50	0	200	6
44	GFT602	Garment Production Technology		3	1	4	75	10	15	50	50	0	200	6
45	GFT603	Advanced Surface ornamentation techniques	GFT 402	3	1	4	75	10	15	50	50	0	200	6
46	GFT604	Advanced Formation Techniques (Weaving)		3	1	4	75	10	15	50	50	0	200	6
47	GFT605	Fashion Photography		3	1	4	75	10	15	50	50	0	200	6
TOTAL				**6**	**2**	**8**	**150**	**20**	**30**	**100**	**100**	**0**	**400**	**12**

SAMPLE PATH

TERM -1

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
1	G101	Communication Skill -I		3	0	0	75	10	15	0	0	0	100	3
2	GFT101	Mathematics		3	1	0	75	10	15	0	0	0	100	4
3	GFT102	Value and ethics in Technical Education		3	0	0	75	10	15	0	0	0	100	3
4	GFT103	Physics		3	0	2	75	10	15	25	25	0	150	4
5	GFT104	History of Fashions		3	1	0	75	10	15	0	0	0	100	4
6	GFT105	Chemistry		3	0	2	75	10	15	25	25	0	150	4
7	GFT201	Drafting & Layout-I		0	1	4	0	0	0	50	50	0	100	3
8	G109	NCC I/NSS I		0	0	2	0	0	0	25	25	0	50	1
TOTAL				**18**	**3**	**10**	**450**	**60**	**90**	**125**	**125**	**0**	**850**	**26**

TERM - 2

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assign ment		Sessional	Viva		
1	G102	Communication Skill-II	G101	2	1	2	50	0	0	25	25	0	100	4
2	GFT106	Basic Garment design	GFT 104	3	1	2	75	10	15	25	25	0	150	5
3	GFT107	Introduction to Textile		2	1	2	50	0	0	25	25	0	100	4
4	GFT202	Drafting & Layout-II	GFT 201	0	1	4	0	0	0	50	50	0	100	3
5	G206B	Introduction to Information Technology		2	1	2	50	0	0	25	25	0	100	4
6	G301	Environmental Education		3	0	0	75	10	15	0	0	0	100	3
7	G110	NCC II/NSS II		0	0	2	0	0	0	25	25	0	50	1
TOTAL				**12**	**5**	**14**	**300**	**20**	**30**	**225**	**225**	**0**	**700**	**24**

TERM - 3

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
1	GFT203	Machine Tools & Equipment		3	1	4	75	10	15	50	50	0	200	6
2	GFT204	Elements of Design		3	0	0	75	10	15	0	0	0	100	3
3	GFT205	Basic Garment Fabrication		2	1	2	50	0	0	25	25	0	100	4
4	GFT206	Material Studies		2	1	2	50	0	0	25	25	0	100	4
5	G302B/D-GFT302/303	Soft Core - 2		3	0	0	75	10	15	0	0	0	100	3
6	GFT401	Style reading, pattern making & Adaptation		2	1	4	50	0	0	50	50	0	150	5
TOTAL				**15**	**4**	**12**	**375**	**30**	**45**	**150**	**150**	**0**	**750**	**25**

TERM - 4

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
1	GFT402	Surface ornamentation techniques		2	1	4	50	0	0	50	50	0	150	5
2	GFT403	CAD in Fashion Technology		2	1	4	50	0	0	50	50	0	150	5
3	GFT404	Fashion Illustration		3	1	4	75	10	15	50	50	0	200	6
4	GFT406	Drafting, Cutting & Stitching (children)		0	1	4	0	0	0	50	50	0	100	3
5	GFT407	Drafting, Cutting & Stitching (women)		0	1	4	0	0	0	50	50	0	100	3
6	GFT410	Fabric Formation Technique		2	1	4	50	0	0	50	50	0	150	5
TOTAL				**09**	**6**	**24**	**225**	**10**	**15**	**300**	**300**	**0**	**850**	**27**

TERM - 5

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
1	GFT405	Drafting, Cutting & Stitching (men)		0	1	4	0	0	0	50	50	0	100	3
2	GFT408	Draping		0	1	4	0	0	0	50	50	0	100	3
3	GFT409	Product development & fashion fore casting		2	1	2	50	0	0	25	25	0	100	4
4	GFT503	Historical Costumes of India		3	1	0	75	10	15	0	0	0	100	4
5	GFT506	Fashion Merchandising		3	1	4	75	10	15	50	50	0	200	6
6	GFT502	Apparel Quality Assurance		2	1	4	50	0	0	50	50	0	150	5
7	GFT504	Creative Dyeing and Printing		0	1	4	0	0	0	50	50	0	100	3
TOTAL				**10**	**7**	**22**	**250**	**20**	**30**	**275**	**275**	**0**	**850**	**28**

TERM - 6

Sl. No.	Code	Course	Study Scheme				Evaluation Scheme						Total Marks	Credit
			Pre-requisite	Contact Hour/Week			Theory			Practical				
				L	T	P	End Exam.	Progressive Assessment		End Exam.	Progressive Assessment			
								Class Test	Assignment		Sessional	Viva		
1	GFT501	Entrepreneurship Development		3	0	0	75	10	15	0	0	0	100	3
2	GFT505	Portfolio development		0	0	12	0	0	0	100	100	0	200	6
3	GFT601-605	Elective- I		3	1	4	75	10	15	50	50	0	200	6
4	GFT601-605	Elective- II		3	1	4	75	10	15	50	50	0	200	6
5	GFT507	Seminar		0	0	6	0	0	0	0	50	50	100	3
6	GFT508	Project		0	0	12	0	0	0	0	150	50	200	6
TOTAL				**9**	**2**	**38**	**225**	**30**	**45**	**200**	**400**	**100**	**1000**	**30**

Industrial/Field Training

Pre-requisite - Students must be either in 4th term or higher.

Code	***Name of Course***	*Teaching Scheme*					**Examination Scheme**				**Total Marks**
		Pre-requisite	**L**	**T**	**P**	**C**	**Theory**		Practical		
							End Exam	**PA**	**End Exam**	**PA**	
GFT 509	Industrial Training (3 weeks OJT + 1 week orientation)		**-**	**-**		**10**	-	-	100	100	200

FOUNDATION COURSES

COMMUNICATION SKILL -I

L	T	P	**Curri. Ref. No.: G101**
3	0	0	

Total Contact hrs.:
Lecture: 45
Tutorial: 0
Practical: 0
Credit :3

Total marks: 100

Theory:
End Term Exam.:75
P.A: 25

RATIONALE

English is not our mother tongue, nor do most of us live in an atmosphere of English. In schools you read English as a *subject* and the main reason behind your reading, for many of you, was simply to pass the examinations.

Now, in the job-oriented education, learners need to learn English not as a subject but as a *service language*- serving as a vehicle for his/her educational as well as professional needs. These are needs for communication. They need to write reports, read instructions and manuals for setting up a machine perfectly and speak to clients for more orders.

So this subject will help to develop reading skills, listening skills, speaking skills and writing skills while using appropriate grammar in reading, writing and speaking. It will enable the learner to use them more confidently in their communicative activities. Learner s will be able to read by themselves text and reference books, articles, different government orders, various letters, non-text materials like charts, diagrams, brochures, technical reports and other writings which not only claim factual comprehension but demand higher levels of comprehension involving inference and evaluation etc. It will enable learners to listen, understand and respond appropriately.

DETAIL COURSE CONTENT

THEORY :

UNIT TOPIC / SUB-TOPIC	**Lecture Hrs.**
1.0 COMMUNICATION	**4**
1.1 Communication and Communications	
1.2 Features of Communication	
1.3 Essential Components of Communication	
1.4 Barriers of Communication	
1.5 Types of Communication	

1.6 Essential Elements of Effective Communication

2.0 READING AND REMEDIAL GRAMMAR USAGE 5

2.1 Developing Reading Skills

2.2 Skimming – Scanning – Reading for information structure

2.3 Remedial Grammar

- Time and Tense – Transformation of Sentences
- Relative Clauses
- Language Function: Reporting, Suggesting, Agreeing, Defining, Purpose, Instruction, Prohibition

3.0 PREPARATION FOR WRITING 3

3.1 Understanding the writing assignment: topic, purpose, reader, scope and constraints

3.2 Analyzing the content

3.3 Determining the scope of topic

3.4 Audience analysis for entry behavior

3.5 Collecting information for the assignment

4.0 WRITING PARAGRAPHS 6

4.1 Identifying Paragraphs

4.2 Essentials of effective coherent paragraphs

4.3 Use of appropriate linkers in paragraphs

4.4 Developing notes into a paragraph

4.5 Identifying and Writing Topic Sentences and Supporting Sentences

4.6 Recognising different types of paragraph organisation

4.7 Use of appropriate tenses, voices and linkers in paraqgraphs

4.8 Writing different types of paragraphs

- Process description
- Comprison and contrast
- Cause and Effect
- Problem Solution

5.0 COMPREHENSION OF TECHNICAL TEXTS _ MANUALS , INSTRUCTIONS ETC. 3

5.1 Recognising important information in written texts

5.2 Note – taking with the use of abbreviations, charts, diagrams and Symbols

5.3 Interpreting with visuals and illustrating with visuals like tables, charts and graphs

6.0 LISTENING 4

6.1 Importance of Active Listening

6.2 Functions of Active Listening

6.3 Techniques for ensuring Active Listening

7.0 PUBLIC SPEAKING 5

7.1 Planning for the speech

7.2 Designing the speech

7.3 Deliver the speech

7.4 Evaluate the speech

8.0 PRESENTATION 5

8.1 Rationale of Presentation

8.2 Types of Presentation

8.3 Planning of Presentation

8.4 Guidelines for use of visual aids

8.5 Practice of Presentation on relevant topics

SUGGESTED LEARNING RESOURCES:

Reference Books :

1. English for Specific Purposes : A learning – Centred approach
2. Hutchinson, Tom and Waters, A lan, CUP 1987
3. The Second Language Curriculum
   - — Ed. Robert Keith Johnson, CUP 1989
4. Designing Tasks for the Communicative Classroom
   — David Nunan, CUP 1989
5. Writing English Language Tests
   — J. B. Heaton Longman Group, U K Limited 1988
6. Writing Matters
   - Kristine Brown & Susan Hood, CUP 1989
7. In at the deep end
   — Vicki & Hollett, OUP 1989
8. Teaching the Spoken Language,
   — G. Brown and G. Yule CUP 1983
9. ENGLISH SKILLS for Technical Students – TEACHERS' HANDBOOK / West Bengal State Council of Technical Education in collaboration with THE BRITISH COUNCIL / Orient Longman.

COMMUNICATION SKILL -II

L	T	P	**Curri. Ref. No.: G102**
2	1	2	

Total Contact hrs.:
Lecture: 30
Tutorial: 15
Practical: 30
Pre-requisite: Communication Skill - I
Credit :4

Total marks: 100

Theory:
End Term Exam.:50
Practical :
End Term Exam : 25
P.A: 25

RATIONALE

This subject will help to identify essentials of business correspondence. It will enable the learner to use them more confidently in their communicative activities. Learner s will be able to write letters asking for application forms, fill in the application forms.
They will be able to prepare a resume or a CV, write letters of application in response to advertisements, learn how to write technical reports, memos and they will be able to prepare themselves for job interview and group discussion.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**ESSENTIALS OF BUSINESS CORRESPONDENCE**	**3**

1.1 Introduction
1.2 Simplicity
1.3 Clarity
1.4 Brevity
1.5 Courteous
1.6 Persuasive
1.7 Sincerity
1.8 Tactful approach

2.0 BUSINESS LETTERS **7**

2.1 Introduction
2.2 Different types of Business Letters
- Letters of Enquiry
- Letters of Placing Orders
- Letters of Complaints
- Letters in response Letters of Enquiry, Placing Orders and Complaints
- Letters in response to Tender Notices

(samples of effective letters referred to above are to be shown to students)

3.0 JOB APPLICATION LETTERS 5

3.1 Introduction
3.2 Job Application Letters in response to advertisements
3.3 Self-application letters for Jobs
3.4 Covering Letters

4.0 MEETING – AGENDA AND MINUTES 3

4.1 Introduction
4.2 Technique
4.3 Key Language

5.0 MEMOS 5

5.1 Introduction
5.2 Essential features
5.3 Format and Body

6.0 E-MAILS 5

6.1 Introduction
6.2 Method
6.3 Use of attachments
6.4 Netiquettes related to e-mails

(Differences between Memos, Business Letters and E-mails to be explained to students)

7.0 TECHNICAL REPORT WRITING 7

7.1 Introduction
7.2 Techniques of writing a report
7.3 Structure of technical reports
7.4 Language of technical reports
7.5 Types of Reports

- Accident Reports (related to industry)
- Laboratory Experiment Reports
- Workshop Reports
- Report of a Job done requiring technical expertise
- Investigative Report

8.0 JOB INTERVIEWS 5

8.1 Importance
8.2 Prepare for an interview
8.3 Anticipating possible questions and framing appropriate answers to them
8.4 Responding politely and appropriately
8.5 Non-verbal communication – body language, postures, gestures, facial expressions, use of space, modulation, pitch, intonation etc.

9.0 GROUP DISCUSSIONS **5**

9.1 Importance and rationale

9.2 Required non-verbal behavior

9.3 Appropriate use of language in group interaction

- Entry / Taking the lead
- Asking for opinion / Creating turns for others to speak
- Expressing opinion (agreeing)
- Expressing opinion (disagreeing)
- Making suggestions
- Politely interrupting
- Stopping or blocking interruptions

(Note: Chapters 8 and 9 are to be dealt in the practical classes)

PRACTICALS:

Suggested activities:

- Organising and participating in Mock interviews by peers, teachers and also experts from the industry

- Students may be encouraged to look up books and websites to get an idea about frequently asked questions and finding out appropriate answers to these questions

- Mock group discussions are to be conducted for students in the presence of teachers and industry experts and these discussions are to be evaluated by peers, teachers and experts

- Students are to be given an exposure to sample Job Interviews and Group Discussions from videos, CDs, DVDs, websites etc.

SUGGESTED LEARNING RESOURCES:

REFERENCES BOOKS:

1. English for Specific Purposes : A learning – Centred approach
   — Hutchinson, Tom and Waters, A lan, CUP 1987
2. The Second Language Curriculum
   — Ed. Robert Keith Johnson, CUP 1989
3. Designing Tasks for the Communicative Classroom
   — David Nunan, CUP 1989
4. Writing English Language Tests
   — J. B. Heaton Longman Group, U K Limited 1988
5. Testing for Language Teachers
   — Arthur Hughes, CUP 1989
6. Writing Matters
   -- Kristine Brown & Susan Hood, CUP 1989

7. Communicate 2
— Keith Morrow and Keith Johnson, CUP 1980

In at the deep end
— Vicki & Hollett, OUP 1989

9. Teaching the Spoken Language,
— G. Brown and G. Yule CUP 1983

10. Teaching Reading Skills in a Foreign Language
— Christine Nuttall, Heinemann 1982

11. Communication in English for Technical Students
— Orient Longman 1984

12. Teachers' Manual (for Communication in English for Technical Students, Orient Longman 1984)
— Curriculum Development Centre
Technical Teachers' Training Institute
(Eastern Region) 1985.

MATHEMATICS

L	T	P	**Curri. Ref. No.: GFT101**
3	1	0	

Total Contact hrs.:
Lecture:45
Tutorial:15
Practical: 0
Credit : 4

Total marks: 100

Theory:
End Term Exam.:75
P.A:25

RATIONALE

Mathematics is the backbone of all areas of technology and hence, technicians and engineers need study of relevant theories and principles of mathematics to enable them to understand and grasp the concept of advance courses of the curriculum. With the above view in mind, the necessary content details for the course of Mathematics-I are derived. It is presumed that this course content will provide a satisfactory foundation for technical applications, which technicians/ engineers supposed to come across in the field of studies.

D E T A I L C O U R S E C O N T E N T

THEORY :

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.

1.0 ALGEBRA **15L+5T**

1.1 Arithmetic and Geometric Progressions (A.P. & G.P.)
1.2 Formula of the nth term of A.P.
1.3 Properties and concept of G.P., the nth term of G.P.
1.4 Complex Numbers

- Definition of a Complex number
- Polar form of a complex number, Problems
- Cube roots of unity, Fourth roots of unity, the nth roots of unity
- Permutation and combination in elementary level with formulae and simple examples.
- Factorials
- Quadratic Equation.
- Properties of quadratic Equation

1.5 **Binomial Theorem**

- Positive integral index
- Expansion of $(x+a)^n$, where n is a positive integer
- Rules for finding general term & middle term etc.
- Calculation of approximate value, when the number of terms, n is large.

- Properties of Binomial Coefficients

1.6 **Sets and Relation**

- Relational algebra
- Sets & subsets
- Operations on sets
- Product sets (Cartesian product)
- Concepts of relation, domain and Range
- Sets arising from relations

2.0 TRIGONOMETRY 10L+5T

2.1 Trigonometric functions
2.2 Trigonometric functions of allied angles
2.3 Trigonometric ratios
2.4 Half angle, double angle, triple angle – derivation & problems
2.5 Compound trigonometric functions
2.6 Properties of a Triangle
2.7 Solution of triangle using the properties
2.8 Trigonometric ratios with angles A±B and C±D
2.9 Definition of periodic function and the period of trigonometric function.
2.10 Interpret the graphs of: a sin (b θ + c), a cos (b θ +c)
2.11 Use multiple and sub-multiple angle formulae to simplify trigonometric expressions.

3.0 STATISTICS 10L+3T

3.1 Data frequency distribution, tabulations and representation.
3.2 Continuous and discontinuous variables
3.3 Frequency- relative and commutative relative
3.4 Graphical representation of frequency.
3.5 Bar chart, Histogram and frequency polygon
3.6 Mean, median, mode and relationship.
3.7 Harmonic mean
3.8 Range, Deviation, Mean deviation, Standard Deviation
3.9 Probability
3.10 Event and different mathematical formulae
3.11 Probability for independent and dependent events
3.12 Problems based on probability
3.13 Introduction : Numerical Methods
3.14 Concept of difference tables.
3.15 Newton's Interpolation methods (Forward and backward)
3.16 Lagrange's interpolation method.
3.17 Concept of extrapolation.

4.0 MATRICES 10L+2T

4.1 Matrix- definition, notations

4.2 Element of matrix
4.3 Type of matrices
4.4 Special Matrices
- Square, diagonal, row, column, scalar Unit, zero or null, upper and lower triangles, Symmetric, skew.

4.5 Introduction to determinants
4.6 Addition and subtraction of matrices
4.7 Product of two matrices
4.8 Adjoint of a matrix
4.9 Inverse matrix
4.10 Solution of a system of linear equations using matrix method.

SUGGESTED LEARNING RESOURCES:

Text Books:

1. College Algebra By A.R. Majumder & P.L. Ganguli
2. Plane Trigonometry Part I By S.L. Loney
3. Statistics By N.G. Das
4. Trigonometry By Das & Mukherjee

Reference Books:

1. Engineering Mathematics Part I By Shanti Narayan
2. Polytechnic Mathematics Vol. I By Dutta & Bera

VALUES AND ETHICS IN PROFESSION

L	T	P	Curri. Ref. No.: GFT102
3	0	0	

Total Contact hrs.: ***Total marks: 100*** **Theory:**
Lecture:45 End Term Exam.:75
Tutorial:0 P.A: 25
Practical: 0
Credit : 3

RATIONALE

Values and Ethics is the essential aspects of an individual to contribute all round development-mind and body, intelligence, sensitivity, aesthetic sense, personal responsibility and spiritual values. Irrespective of branch of specialization of students in different level, components of values and ethics is a must to learn through the specific syllabus for different level. In Technician Education (polytechnic education) it is equally important to learn something related to Value and Ethics, reflection of which may be observed in the filed of work as a common practice.

D E T A I L C O U R S E C O N T E N T

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.

1.0 **INTRODUCTION TO VALUES AND ETHICS** **15**

- Introduction and definition of values and ethics.
- Various ethical issues in profession.
- Value and ethics in Technical Education:
  - Application of values and ethics in technical education.
  - Relevance of values and ethics in engineering practice and professional life.

2.**0 CORE AND RELATED VALUES** **15**

- Truth and Wisdom- reference to Indian context
- Love and compassion.
- Creativity.
- Peace and Justice.
- Health and Harmony with Nature- Indian and oriental ideas
- Sustainable Development.
- National unity and Global Solidarity.
- Universal Fraternity

3.0 GLOBAL ISSUES **15**

- Corporate Social Responsibility (CSR)
- Environmental ethics
- Computer ethics
- Intellectual Property Right (IPR)

SUGGESTED LEARNING RESOURCES**:**

(a) Reference Books:

1. Ethics And Values - by Shiv Khera
2. Human Values And Professional Ethics- Vaishali R Khosla, Kavita Bhagat- Technical Publications
3. Textbook On Professional Ethics And Human Values- R. S Naagarazan- New Age International
4. Human Values and Professional Ethics- Dr. Pushpendra Singh, Dr. Reshu Chaudhary, Dr. Panwar- Krishna's Publications

SUGGESTED LIST OF ASSINMENT:

- Making charts on safety saves, saves the environment for developing core value of health harmony and nature
- Making Integrity as a way of life for core value of truth and wisdom.
- Case study – Human rights in work place.
- Role play for core value building harmony, cooperation and teamwork in a workplace
- Self analysis – Core value of love and compassion
- Sharing of individual responses for core values of love and compassion
- Mind mapping for core value of truth and wisdom

PHYSICS

L	T	P	*Curri. Ref. No.: GFT103*
3	0	2	

Total Contact hrs.: ***Total marks: 150*** *Theory:*
Theory: 45 End Term Exam: 75
Tutorial :0 P.A.: 25
Practical: 30
Credit: 4

RATIONALE:

Physics form a foundation for all technician courses. The study of engineering concepts of physics will help the students in understanding engineering subjects where the emphasis will be on the application of these concepts. A good foundation in physics will also help students for self-development in future, to cope up with the continuous flow of new innovation and discoveries in technology. The topics in Applied Physics for the foundation course were identified on the following basis:

- The attainment level of students in Physics at entry level to polytechnics.
- Reference to engineering subjects.
- Continuity of sequence necessary for logical development of the subject

DETAILED COURSE CONTENTS

THEORY :

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**UNITS, DIMENSION AND MEASUREMENTS**	**2**
1.1	**Units, Dimension** • Concept of unit of physical parameters • Fundamental and derived units • SI system of units of different physical parameters • Dimension with examples of different physical parameters.	
1.2	**Measurements** • Measuring devices e.g., slide callipers, screw gauge, spherometer with concept of vernier constant, least count and zero error. • Physical Balance	
2.0	**MECHANICS**	**4**
2.1	**Motion along a straight line and Force** • Concept of scalar and vector quantities • Speed, velocity and linear acceleration • Equations of motion with constant acceleration (derivation not required)	

- Equations of motion of falling body under gravity
- Simple problems on linear motion
- Newton's laws of motion, Action and reaction, tension
- Force, inertia, momentum, impulse and impulsive force with practical examples
- Conservation of linear momentum.

3.0 GRAVITATION 3

- Newton's laws of gravitation
- Newton's gravitational constant G and its SI unit
- Acceleration due to gravity (g) and its relation with "G".
- Variation of g with altitude and latitude (deduction not required)
- Difference between mass and weight
- Simple problems

4.0 WORK, POWER AND ENERGY 3

- Work, power and energy with their units and mathematical expressions
- Relation between Horse power and Watt
- Different forms of mechanical energy : PE, KE and their expressions
- Conservation of energy and transformation of energy with examples
- Simple problems

5.0 PROPERTIES OF MATTER 6

5.1 Properties of solid

- Plasticity and elasticity in solids
- Deformation of bodies by the action of external forces change in size and change in shape
- Unit of stress – tensile stress, compressive stress and Shear stress with examples
- Unit of strain – tensile strain., volumemetric strain and shear strain & Hooke's law
- Modulus of elasticity – Young's modulus, Bulk modulus and Modulus of rigidity, Poison's ratio and their units [Definition & basic concepts only, no deduction]
- Stress – Strain curve

5.2 Properties of Fluid

- Thrust and pressure
- Law of fluid pressure, Pascal's law and working principles of hydraulic press
- Archimedes Principle and its applications
- Specific gravity and relative density
- Hydrometers and their uses
- Properties of gas : Toricelli's Expt. & Simple Barometer
- Simple problems

6.0 **HEAT** 9 6.1

Heat and temperature (Review)

- Heat and temperature
- Fixed points and different scales of temperature - Fahrenheit, Celsius and Kelvin and their relationships
- Simple problems

6.2 **Measurement of heat**

- Quantity of heat, units of heat:Joule and Calorie
- Specific heat of solid, heat capacity ,water equivalent
- Principle of calorimeter, Measurement of specific heat
- Change of state : Latent heat, evaporation & boiling, effect of pressure
- Boyle's law and Charles law, Universal gas law and universal gas constant.
- Idea of two specific heat capacities of gas: C_p and C_v and their relationships (deduction not required)

6.3 **Thermal expansion & Transmission of heat**

- Expansion of solid – linear, superficial and cubical co-efficient of expansion & their units
- Interrelationship between different co-efficient of expansion with examples
- Different methods of transmission of heat : conduction, convection and radiation
- Co-efficient of thermal expansion & its unit
- Good conductors and bad conductors of heat
- Simple problems

7.0 SOUND 8

7.1 **Simple Harmonic Motion**

- Simple harmonic motion and its characteristics
- Time period, frequency & amplitude of vibration
- Mathematical expression of SHM
- Examples of SHM: Simple Pendulum
- Idea on Longitudinal & Transverse wave
- Simple problems

7.2 **Production and propagation of Sound**

- Natural vibration, forced vibration with examples
- Resonance of sound with examples
- Principle of resonance to find out velocity of sound in air.
- Velocity of sound , Newton's formula and Laplace correction (Idea only, no deduction)

7.3 **Reflection of sound**

- Echo, reverberation
- Simple problems

7.4 **Musical sound, noise**

- Characteristics of musical sound and noise with examples
- Factors affecting sound

(Note: 10 L Hrs. can be used for assessment and evaluation of students on each module.)

PRACTICAL:

Suggested list of experiments:

1. To measure the volume of a wooden block by using Vernier callipers.
2. To measure the surface area of a metal washer by Vernier inside callipers
3. To measure the depth of a hole by Depth Gauge (Vernier callipers)
4. To measure the cross-section of a wire by Screw Gauge.
5. To determine the thickness of a glass plate by Spherometer.
6. To adjust a common balance and to determine the specific gravity of a liquid by specific gravity bottle.
7. To establish the relation between pressure and volume of a fixed mass of gas at a constant temperature using Boyle's apparatus.
8. To determine the acceleration due to gravity (g) of a place by simple pendulum .
9. To measure the velocity of sound in air by air resonance column method.

SUGGESTED LEARNING RESOURCES:

Reference Books :

1. Principle of Physics – Subrahmanyan & Brizal
2. Intermediate Physics – S.C.Roy Chaudhury & D.B.Sinha
3. Fundamentals Of Physics – David Halliday, Robert Resnick & Jeal Walka
4. University Physics – Francis W. Sears, Mark W. Zemans Key & Hugh D. Young
5. University Physics – Hugh D. Young & Roger H. Freedman
6. A text book of Physics (Part I) – C. R. Dasgupta
7. Elements of Higher Secondary Physics (Part I) - D. Dutta, B. Pal & B. Chaudhuri
8. Physics (Volume I) - Ajoy Chakraborty
9. Applied Physics (Vol. 1) - Saxena H.C. & Singh Prabhakar
10. Physics for 10+2 students (Part I) - Das, S.K, Sisodia M.L, Neher P.K., Kachhawa C.M.

HISTORY OF FASHION

L	T	P	Curri. Ref. No.: GFT104
3	1	0	

Total Contact hrs.:
Lecture:45
Tutorial:15
Practical: 0
Credit : 4

Total marks: 100

Theory:
End Term Exam.:75
P.A: 25

RATIONALE

The students of fashion technology should be able to appreciate our ancient civilization, the fashion existing in the different periods, their contribution in shaping the present and promoting the future trends in the field of fashion.

D E T A I L C O U R S E C O N T E N T

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**ANCIENT AGE** - Ancient Egypt - Germanic (Prehistory & Easy times) - Ancient Greece - Ancient Rome - Byqzantine - middle age - Romanesque - Gothic	8L + 4T
2.0	**MODERN AGE** - Renaissance Fashion - The Landsknecht - Spanish Fashion Baroque - Netherlands Fashion - Rhineland Fashion **Rococo Fashion**	**8L + 4T**
3.0	**RECENT TIMES** - Neoclassicism - Romanticism - Art Noveau	**6L +2T**

4.0	**PRESENT DAY** **20th Century** - The Twenties - The Thirties - The Forties - The Fifties - The Sixties - The Seventies - The Eighties	**7L + 2T**
5.0	**HISTORY OF INDIAN COSTUME** - Classification of Indian history period- wise from prehistoric period to 20th century history and modern history.	**6L +2T**
6.0	Evolution of costumes pertaining to inner, outer, upper and lower garments.	**6L + 1T**
7.0	Study of traditional basic Indian costume of men's, and women's	**4L**

SUGGESTED LIST OF ASSIGNMENT

- Preparation of a portfolio of select fashion silhouettes and accessories of all periods
- Design few contemporary silhouettes based on inspirations drawn from different periods

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
History of Costume in the West	Francois Boucher; Thames & Hudson; Reprint ;1996
The Guide to Historic Costume	Karen Baclawski; Drama Book Publishers; Reprint; 1995
The Chronicle of Western Costume	John Peacock; Thames & Hudson; Reprint ; 2010
Folk Costumes of the World	Robert Harrold, Phyllida Legg; Blandford Press; 1989
The Complete Costume History	Auguste Racinet; Taschen America ; reprint ; 2006
What People Wore When	Melissa Leventon; St. Martin's Griffin; 1st; 2008

Costume & Fashion in Colour:1550-1760	Jack Cassin-Scott, Ruth M. Green; Blandford Press; Reprint ;1975
Survey of Historic Costume: A History of Western Dress	Phyllis G. Tortora, Keith Eubank; Fairchild Books, 5th; 2010
Traditional Indian Costume & Textiles	Parul Bhatnagar; Abhishek Publications; 2nd; 2004
Indian Costume	G.S.Ghurye; Popular Prakashan;2nd; 1995
Indian Costume	B.N.Goswamy, K.Krishna, T.P. Dundh; Calico Museum of Textiles; Reprint ;2002
Survey of Historic Costume	Tortora, P. & Eubank, K; Fairchild Publications; 4th;2005

CHEMISTRY - I

L	T	P	*Curri. Ref. No.:GFT105*
3	0	2	

Total Contact hrs.:
Theory: 45
Tutorial : 0
Practical: 30
Credit: 4

Total marks: 150

Theory:
End Term Exam: 75
P.A.: 25
Practical:
End Term Exam: 25
P.A : 25

RATIONALE:

Chemistry is an important subject in technician education, because of the fact that fundamental knowledge and skills in respect of chemical characteristics of matters related to solid, liquid and gas are essential elements on which various aspects of application in technology depend upon.

Chemistry-I will enable the students to develop fundamental knowledge and skills related to chemical properties of matters in general, such as solid liquid and gas, and their appropriate applications in engineering disciplines which include general chemistry, chemistry of water Electro-chemistry, physical chemistry, organic chemistry and refractories.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**GENERAL CHEMISTRY**	**12**
1.1	Concept of symbol, valency, formula, atomic mass, molecular mass, elementary idea of atomic structure (Review).	
1.2	**Solution** 1.2.1 Classify and explain solution according to concentration 1.2.2 Distinguish among suspension, colloids and true solution. 1.2.2 Define and explain solubility, effect of temperature on solubility 1.2.3 Mention practical applications of colloids in different situations 1.2.4.1 Colloidal impurities in drinking and sewage water. 1.2.4.2 Finely divided colloidal particles in air causes Air-Pollution.	
	Assignment and Class test	
1.3	**Acid, Base and Salt**	

1.3.1 Define and classify acid, base and salt (Review)

1.3.2 Define and explain normal solution, molar solution, titration and indicator

1.3.3 Define pH of a solution and pH Scale

1.3.4 Calculate pH from H^+ ion concentration

1.3.5 Mention application of pH in industry such as

1.3.5.1 pH of a boiler feed water

1.3.5.2 Role of pH in sewage treatment

1.3.5.3 pH in Sugar, Paper industry

1.3.5.4 Buffer Solution, types and application.

Assignment and Class test

1.4 Chemical Bonding

1.4.1 Covalent Bond, Ionic Bond, Hydrogen Bond and Metallic Bond Assignment and Class test

2.0 CHEMISTRY OF WATER **10**

2.1 State the different types of impurities present in natural water and name impurities under each of them types.

2.2 Explain how natural water gets contaminated with the impurities.

2.3 Explain the action of soap on water

2.4 Define and explain soft and hard water with illustrations

2.5 Classify and explain hardness of water with illustration

2.6 State different ways of expressing concentration of impurities in water including hardness.

2.7 Name the bad effects caused by natural water when used in domestic as well as industrial purpose.

2.8 State and Explain the remedial measures of the following bad effects of natural water in boiler.

- Scales and sludges
- Caustic Embrittlement
- Priming and foaming
- Corrosion

2.9 Define boiler feed water

2.10 Describe with help of diagram of the following water treatment Process.

2.10.1 Lime soda process

2.10.2 Permuit or Zeoilite process

2.11 Describe with the help of block diagram, the treatments done on a sample of raw water to produce drinking water and boiler feed water. Solve problems on a) bad effects on natural water b) water treatment process.

Assignment and Class test

3.0 PHYSICAL CHEMISTRY 7

3.1 Catalyst, types, characteristics and application of Catalyst in Industries

3.2 Radioactivity-Introduction, Characteristics of alphas, beta and gamma rays, half-life period, artificial fission, atomic fusion, application in different fields.

4.0 ORGANIC CHEMISTRY 10

4.1 Organic chemistry and its scope in various industries.

4.2 Tetravelancy of Carbon atom

4.3 Functional groups

4.4 Distinguish between organic and inorganic compounds.

4.5 Homologous series-alkane, alkene, alkyne, alcohol, aldehyde, ketone, ether, carboxylic acid.(general formula)

4.6 Preparation method of Methane, ethane Ethene and ethylene

4.7 Benzene and its preparation and discuss its derivatives.

5.0 Refractories 6

5.1 Define refractories

5.2 Classification

5.3 Properties
- 5.3.1 Refractoriness,
- 5.3.2 Strength
- 5.3.3 Thermal expansion,
- 5.3.4 Porosity

5.4 Portland Cement
- 5.4.1 Composition
- 5.4.2 Properties
- 5.4.3 Types.

PRACTICAL:

Suggested list of experiments:

- To titrate using standard acid solution to know the strength of a base using indicator or vice-versa.
- To determine alkalinity of a water sample by titration method.
- To observe action of soap on hard water(only demonstration).
- To determine the total hardness of water sample by complexometric method using EDTA
- To determine the pH of different sample by using pH meter.
- To detect qualitatively the presence of Arsenic/Iron in drinking water by using Arsenic/Iron Kit

SUGGESTED LEARNING RESOURCES:

Text Books:

1. Modern Intermediate Chemistry Part I and Part II By R.N. Nanda, A.K. Das , Y.R Sharma
2. Engineering Chemistry by Jain & Jain
3. A Text Book of Polytechnic Chemistry by J.P. Mehta & Jain and Jain
4. Industrial Chemistry by B.K. Sarma

Reference Books:

Intermediate Chemistry by R.K. Samal.

BASIC GARMENT DESIGN

L	T	P	*Curri. Ref. No.: GFT106*
3	1	2	

Total Contact hrs.: ***Total marks: 150*** **Theory:**
Theory: 45 End Term Exam:75
Tutorial : 15 P.A.: 25
Practical: 30 **Practical:**
Prerequisite: GFT104 End Term Exam: 25
Credit: 5 P.A : 25

RATIONALE:

The students should have knowledge and skills in cutting, sewing pressing etc. so that they are able to appreciate design components. They should be able to design garments and accessories for different age groups, and occasions with proper selection of fabrics. After going through this subject, the student will be able to design garments appropriately to customer's satisfaction and need

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**CUTTING** The planning, drawing, drafting, pattern making and reproduction of the maker, the spreading of the fabric to form a lay, the cutting of the fabric.	**10**
2.0	**SEWING** The propertied of seams, darts seam types, sewing machine needles types, sewing problem basic sewing machine.	**10**
3.0	**THE USE OF COMPONENTS AND TRIMININGS** Labels and motifs, lining, interlinking, waddings.	**8**
4.0	**PRESSING** The principle of pressing, pressing Equipments and methods.	**8**
5.0	**QUALITY CONTROL** Principles of quality control, Total Quality Control, just in time. Inspection systems and care labeling of apparel and textile/Eco- labels American care labeling, International care labeling System, British care labeling systems, Japanese care labeling systems.	**8**

SUGGESTED IMPLEMENTATION STRATEGIES

- Hands on practice for preparing paper patterns of desired garment.
- The students may be taken to the nearby garment manufacturing organizations to demonstrate various pattern making and style interpretation processes

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Garments design	Helen Joseph Armstrong, HarperCollins, 5th,2009
2. Design for the Real World: Human Ecology and Social Change	Victor Papanek, Victor J. Papanek; Academy Chicago; Reprint; 1984
3. Repeat Patterns: A Manual for Designers, Artists and Architects	Peter Phillips, Gillian Bunce; Thames & Hudson; Repeat; 1993
4. Textile Designs: 200 Years of Patterns for Printed Fabrics Arranged by Motif, Colour, Period and Design	Susan Meller, Joost Elffers; Thames & Hudson; Repeat; 2002
5. Garments Finishing and Care Labeling	SS Satsangi; Usha Publication; 2nd; 2008

PRACTICAL:

Suggested list of assignments:

1. Designing of any 5 garments by applying principles of garment design.
2. Designing casual and formal frocks, jump suits/dungarees, nightwear, shirts and shorts using mix and match fabrics and prints.
   No. of Designs = 4
   Age = 2-5 years
3. Designing accessories for children - Bags - Shoes - Belts - Head gears
4. Sourcing of suitable materials
   The students should do a market survey for the fabrics, colours and textures available in the market. They are required to attach suitable fabric swatches on the design sheets.
5. To study tools and equipments used in clothing /garments constructions.
6. Demonstration of machines parts of sewing machine, Threading & working defect remedies and oiling Types of Stitches
7. Practice of making of different types of opening, buttons holes fasteners, taking & hemming types of collars neck- lines, stitching of different cloths.
8. Appliances required for pressing and finishing (mill visit only)

INTRODUCTION TO TEXTILES

L	T	P	***Curri. Ref. No.:GFT107***
2	1	2	

Total Contact hrs.:	***Total marks: 100***	*Theory:*
Theory: 30		End Term Exam: 50
Tutorial :15		P.A.: 0
Practical: 30		*Practical:*
Credit: 4		End Term Exam: 25
		P.A : 25

RATIONALE

The knowledge and skills related to textile science is essential to provide a comprehensive insight into the basic knowledge about fibers, yarns and relevant properties affecting the ultimate performance and use of fabrics by the consumer. The subject will educate students about the various stages from fibre to fabric and familiarize them with the fabric properties to enable better design skills.

DETAILED COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**CLASSIFICATION OF TEXTILE FIBRES** History, origin.	**2**
2.0	**MANUFACTURING, USES OF DIFFERENT TEXTILE FIBRES**	**3**
3.0	**PROPERTIES OF TEXTILE FIBRES** -Physical and Chemical properties -General properties of fibers (Durability, Serviceability, Suitability according to Weather and Climate, Washability, Satisfactory length, Adequate strength, Cohesiveness or Spinnability, Elasticity, Flexibility, Pliability, Softness, Luster, Absorbency)	**2**
4.0	**FIBER IDENTIFICATION TESTS** Burning, Physical, Chemical	**2**
5.0	**LOOMS** Parts of looms, types of looms.	**3**
6.0	**YARNS** Types of yarns. Yarn twist.	**3**

7.0	**WEAVING** Selvedge-different types of weaves. Plain, Basket, Rib, Twill, Satin, Sateen, Bird's – Eye. Fabric Count.	**4**
8.0	**STUDY OF FINISHES** Special finishing such as Mercerizing, Sanforising, Bleaching, Crease Resistance, Embossing, Tentering, Calendaring etc.	**4**
9.0	**DYEING & PRINTING** Classification of dyes, pigment; Definition stages of dyeing (fibre, yarn, piece, garment); Methods and Style of Printing	**4**
10.0	**STUDY OF DIFFERENT TYPES OF FABRICS** Name of different fabrics and their texture, such as cambric, canvas, casement, china silk, cheese cloth, flannel, gauge, buckram, longcloth, linen, velvet, dimitry, denim, jean, organdy, voile, lawn, taffeta, chiffon, georgette, wash and wear, rubia, tissue, pure silk. All varieties of handloom fabric , etc.	**3**

SUGGESTED IMPLEMENTATION STRATEGIES

Theory classes are to be supplemented by:

- Demonstration of samples of different types of weaves and looms
- Visit to local handloom and powerloom industry to be organized
- Visit to weavers unit
- Hands on experience of looms
- Weeks training at powerloom unit
- Demonstration of different weaving samples.

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
1. Fabric Science	Joseph Pizzuto; Fairchild Books; 6th; 1994
2. Textiles-Fibre to Fabric	P. B. Corbman; McGraw-Hill ; 6th;1989
3. Classification of Textile Techniques	Calico Museum of Textiles, Ahmedabad, Vol.14, 1979
4. Basic process and clothing construction	S Doongaji & R.Deshpande; Raaj Prakashan; 6th;1990
5. Essentials of Textiles	M.L. Joseph; Holt Rinehert & Winston;5th; 1988
6. Understanding Textiles	Tortora, G. Phyllis; McMillan Co.; 2nd;1987
7. Textile Fibres and their Use	K. P. Hess; Oxford and IBH Co.;2nd; 1978
8. Textile Fabrics and their Selection	Wingate, B. Isabel; Prentice Hall ; 7th; 1976

(b) Others :

- Slides/Video clipping of different types of looms
- Weaving samples for ready reference
- Sample of looms of local textiles
- Sample of different types of finishes

PRACTICAL:
Suggested list of assignments:

1. Fibre identification test by
    a) Burning
    b) Chemical
    c) Physical
2. Identify weaves. Prepare samples of different weaves with paper.
3. Prepare a catalogue of fabric samples (swatch files) consisting of different types and their characteristics.
4. Visit textile laboratory/ textile industry/ process house to familiarize with the various processes and prepare report.

HARD CORE COURSES

DRAFTING & LAYOUT - I

L	T	P	Curri. Ref. No.: GFT-201
0	1	4	

Total Contact hrs.: ***Total marks: 100*** **Practical:**

Lecture: 0 End Term Exam: 50

Tutorial:15 P.A.: 50

Practical: 60

Credit : 3

RATIONALE

The course is a prerequisite for advanced Drafting and Layout – II. Ability to take standard measurements and use of measurement charts will be developed. The students are supposed to know how to adapt basic blocks to various garment designs, and layouts. Thus the subject deals with variations of pattern and styling of garments. After going through this subject, the students will be able to draft various components of the garments.

DETAILED COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**STANDARD MEASUREMENTS** - Introduction to standard measurements, rules of taking measurements, importance of taking accurate measurement. - Standards measurement charts, preparation of standard measurement charts, using standard measurement charts. - Methods of taking measurements (direct, indirect, landmarks) - Classification of measurements – circumference, horizontal & vertical measurements.	**3T**
2.0	**STUDY OF HUMAN BODY & ANTHROPOMETRIC MEASUREMENTS** - Study of human body with reference to skeleton, muscles, joints, organs growth of human body ; - Various considerations in making of clothes; - Main parts of human body as head, column, shoulder, waist, hip, knee, etc.; - Six head theory, its principles and application; - Anthropometric data and method of taking anthropometric measurements.	**3T**

3.0	**LAY-OUTS** - Introduction to layouts; Methods and principals of preparing layouts; preparing lay-outs on scale; preparing lay-outs for single garments; importance of preparing economic layouts.	**3T**
4.0	**FABRIC ESTIMATION** - Fabric estimation for different garments - The basis of size and fabric width - Fabric estimation by given formulae - Fabric estimation by preparing lay-outs	**3T**
5.0	**SOCIAL PSYCHOLOGICAL ASPECTS OF FEMALE CLOTHING** - Points to be considered while selecting ladies garments - Factors affecting selection of ladies garments - Selection of ladies garments according to age and activity	**3T**

SUGGESTED IMPLEMENTATION STRATEGIES

Sufficient practice for taking body measurements and from stitched garments is required. Demonstration of taking anthropometric measurements. As this is a skills based course sufficient time should be given for hands on practice. Different types of sample should be shown in the class room.

SUGGESTED LEARNING RESOURCES

(a) Reference Books :

Title	Author; Publication; Edition; Year
Pattern Making for Fashion design	Helen Joseph Armstrong, HarperCollins, 5th,2009
The ABC's of Grading	Murray Sacheir, Scheier, 2nd ,1974
Basic Pattern Skills for Fashion Design	Bernard Zamkoft, Fairchild Books, 2nd, 2009
Design Apparel Through the Flat Pattern	Ernestine Kopp, Fairchild Books, 6th, 1992
Pattern Cutting and Making up	Martin Shoben, LCFS Fashion Media, 2nd , 2000

PRACTICAL:

Suggested list of assignment / tasks:

- Taking measurements directly from body
- Locating land marks and taking anthropometrics measurements
- Taking Measurements from the garments

Practice of use of
- Squares and scales
- French curve – for arm-hole, necklines etc.
- Practice on use of other equipment

Drafting of :
- Child's Panty
- Bloomer
- Child's bodice block and sleeve block
- Child's skirt block

Note: The students may be taken to the nearby manufacturing organizations to demonstrate various pattern making and style interpretation processes.

DRAFTING & LAYOUT - II

L	T	P	Curri. Ref. No.: GFT-202
0	1	4	

Total Contact hrs.: ***Total marks: 100*** **Practical:**
Lecture: 0 End Term Exam: 50
Tutorial:15 P.A.: 50
Practical: 60
Pre-requisite : GFT201
Credit : 3

RATIONALE

The students should know various considerations in making of garments, scope and importance of drafting and pattern making so that they are able to take measurements, interpret the style of any given design and make the pattern. The subject therefore deals with use of modern tools for drafting, study of pattern making and styling of garments.

DETAILED COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	- Study of modern tools and equipments used for drafting, cutting and preparing lay-outs - Principle of pattern making – manipulation addition continuing - Study of patterns before cutting the fabric, applying pattern for the following factors: seam allowance, placement on folds, grain line, construction markings, notches, sleeves.	3T
2.0	Pattern details – terminology and classification of : - Collar - Sleeves - Yokes - Functional and decorative - Empire and princess line - Pockets	3T
3.0	- Pattern styles – skirt terminology - Categorization of skirts on the basis of length and flare and their variations	2T
4.0	- Pattern styles – pants terminology	2T

	- Categorization of pants on the basis of length, fit and their variations	
5.0	- Pattern styles – children wear - Categorization of children wear on the basis of length, fit and their variations	2T
6.0	- Study of the basic figure types, figure defects and developing patterns for them - Layouts - Planning layouts for various widths and special fabric (e.g. plaids, piles and unidirectional fabrics)	3T

SUGGESTED IMPLEMENTATION STRATEGIES

Hands on practice for preparing paper patterns of desired garment

SUGGESTED LEARNING RESOURCES

(a) Reference Books :

Title	Author, Publication, Edition, Year
1. Pattern Making for Fashion design	Helen Joseph Armstrong, HarperCollins, 5th,2009
2. The ABC's of Grading	Murray Sacheir, Scheier, 2nd ,1974
3. Basic Pattern Skills for Fashion Design	Bernard Zamkoft, Fairchild Books, 2nd, 2009
4. Design Apparel Through the Flat Pattern	Ernestine Kopp, Fairchild Books, 6th, 1992
5. Pattern Cutting and Making up	Martin Shoben, LCFS Fashion Media, 2nd , 2000

PRACTICAL:

Suggested list of assignments:

1. Style interpretation of any given design

2. Adaptation of child's bodice to:
   - Yokes
   - Bodice lengths

3. Adaptation of basic sleeve to:
   - Puff sleeve
   - Cap sleeve
   - Flared sleeve
   - Magyar sleeve
   - Balloon sleeve

- Petal sleeve
- Leg-o-mutton sleeve

4. Drafting and adaptation of various collars
   - Baby collar
   - Peter Pan collar
   - Flat and raised
   - Cape collar
   - Sailor's collar
   - Convertible collar

Note: The students may be taken to the nearby garment manufacturing organizations to demonstrate various pattern making and style interpretation processes

MACHINE TOOLS AND EQUIPMENT

L	T	P	**Curri. Ref. No.: GFT-203**
3	1	4	

Total Contact hrs.:	***Total marks: 200***	**Theory:**
Lecture:45		End Term Exam: 75
Tutorial:15		P.A.: 25
Practical: 60		**Practical:**
Credit: :6		End Term Exam: 50
		P.A.: 50

RATIONALE

Textile materials undergo various processes before completion of a garment. A fashion designer is required to have the knowledge of various tools and machines and their maintenance. This course deals with the machines, tools and equipment used in the garment manufacturing process and the method of using them safely. This course will also be useful to the learners for maintaining the laboratory equipment.

DETAILED COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**KNOWLEDGE OF MACHINES** Parts of machines and working of sewing machine, Hand-operated, Treadle operated, and Electric Motor operated.	**5**
2.0	**FUNCTION OF EACH PART OF SEWING MACHINE**	**3**
3.0	**MACHINE MAINTAINANCE** - Preventive maintenance of machines - Dissembling & assembling of machines and equipments. - Cleaning and oiling of parts - Changing parts.	**4**
4.0	**COMMON FAULTS OF MACHINES AND THEIR REMEDIES**	**4**
5.0	**MEASURING & MARKING TOOLS** - Measuring tools-Inch Tape, Meter scale, different types of scales used for Drafting & Marking, French curve, Dress-makers square, curved stick - Marking tools -Tracing paper, Tracing wheel, Tailors chalk,	**4**

	Pencil, Pins.	
6.0	**CUTTING, SEWING & FINISHING TOOLS** - Cutting tools-Different types of scissors, seam rippers. - Sewing Tool-Needle, Pin, Thimble, Bodkin. - Finishing Tool-Pointer and Creaser, Electric Iron, Steam iron, Automatic Iron, Ironing Board.	**4**
7.0	**CLOTH ESTIMATION** Cloth Estimation and Conversion Chart and Lay out. Body Measurement.	**3**
8.0	**TIME SAVING DEVICES** 1. Hemmar. 2. Tucker. 3. Quilter. 4. Ruffler. 5. Cording Foot. 6. Zig-Zag. 7. Embroidery Plate. 8. Needle Threader. 9. Cloth Guide. 10. Electric Scissor 11. Zipper. 12. Electric Cutter. 13. Tracing Wheel.	**7**
9.0	**REPAIRING OF GARMENTS** Repairing-Mending, Patching, Darning, Renovating of Garments.	**4**
10.0	**SAFETY MEASURES** Safety Measures, Precaution to be taken while working with sewing machine and electrical equipments.	**4**

SUGGESTED IMPLEMENTATION STRATEGIES

This course is a base for all other advanced course and it deals with handling of various machines and accessories. Hence as far as possible there should be demonstration in the classroom supported by hand on experience in the laboratory. Industrial visits may be organized for special machines. The students should be given exercises on fault finding and repairing the defective machines by demonstration so that they are able to maintain the garment machinery in proper working condition

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
1. Principles of tailoring	Dattatreya joshi
2. McCalls's Sewing book	McCalls Corp oration.

3. Tailoring Manual	Reader's digest
4. Dress Making Simplified	Valerie Cock; Wiley-Blackwell; 3rd; 1991
5. Basic process and clothing construction	S Doongaji & R.Deshpande; Raaj Prakashan;6th;1990
6. Textiles and clothing	R. Vatsala; ICAR ; 2003
7. Sewing Machine Maintenance Manual	Usha Sewing Machine Co.
8. Sewing Machine Maintenance Manual	Singer India Ltd.

a) Others :

- Models of sewing machines
- Safety Charts
- Samples of Darning and Patching

PRACTICAL:

Suggested list of assignment:

1. Dissembling and assembling of sewing machine and equipments.
2. Cleaning and oiling of machine.
3. Changing parts of machine and equipments.
4. Common faults and their remedies.
5. Using various tailoring tools and equipments.
6. Prepare layout of garments and estimate cloth required for different width of fabric.
7. Practice taking body measurement of dummies.
8. Techniques of mending, darning, patching, on samples.
9. Renovation of garments.
10. Observing safety measures while working with sewing machine and electrical equipments
11. Preparation of file for parts of machines tools and equipments time saving devices mending patching, darning, and sample.

ELEMENTS OF DESIGN

L	T	P	*Curri. Ref. No. GFT204*
3	0	0	

Total Contact hrs.: ***Total marks: 100*** **Theory:**

Theory: 45 End Term Exam: 75

Tutorial : 0 P.A.: 25

Practical : 0

Credit: 3

RATIONALE

The students of fashion technology will be able (i) to develop understanding of elements of design (point, line, pattern, shape, texture, color form& space). (ii) to develop understanding of principles of design (balance, rhythm, harmony, proportion, emphasis & variety). (iii) to understand & analyze the effective use of elements / principle of design & fashion in the garment design process.

DETAILED COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**IMPORTANCE OF ELEMENTS OF DESIGN AND FASHION**	**4**
2.0	**LINE –** • Directing • Dividing • Psychological effects of line • Optical Illusion	**6**
3.0	**SHAPE –** • Geometric • Natural • Non-objective • Silhouettes	**6**
4.0	**TEXTURE –** • Visual • Tactile • Audible	**6**
5.0	**VALUE & COLOUR –** • Colour wheel • Colour schemes • Colour psychology	**6**

6.0	**PRINCIPLES OF DESIGN -** • Rhythm, • Balance, • Emphasis, • Harmony, Scale, • Proportion, Variety	**8**
7.0	**ELEMENTS OF FASHION –** • Skirts • Dresses • Trousers • Tops • Jackets • Coats • Necklines • Collars • Sleeves • Cuffs • Pockets • Yoke	**8**

SUGGESTED IMPLEMENTATION STRATEGIES

- Class room lecture and discussion
- Computer assisted presentations
- Group discussions and presentation
- Review and feedback by faculty

SUGGESTED LIST OF ASSIGNMENT

- Classification of lines.
    - Effects of Lines.
    - Optical illusion with Lines.
    - Dominant lines.
- Shapes – Composition using shapes, Forms, Silhouettes – Types.
- Colours, colour system, colour chart, warm colours, cool colour scheme and rain-bow colours.
- Textures-Prepare samples of various types of textures listed in theory.
- Application of Principle of Design.
- Prepare file with different types of fabric and write their purpose.

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
1. Art & Representation	John Willats, Amazon.com
2. Visual Perception	Rudolf Armheim, Laber, London, 1956
3. Elements of Design	Albert W. Porter, Davis Publications,U.S., 1974
4. Basic Principles of Design (Vol. 1-4)	Manfred Maier, Van Nostrand Reinhold, 1977
5. Basic Design: The dynamics of visual form	M. de Sausmarez, A & C Black. London, 2007
6. Principles of Color	Birren & Fabersvan, Van Nostrand Reinhold, 1969
7. Aesthetics and the sociology of arts and anthropology	Janet Wolff, University of Michigan Press, 1993
8. Clothing Technology	Hannelore Eberle Hermann Hermeling Marianne Horaberger Dieter Menzer Warner Ribng

INTRODUCTION TO INFORMATION TECHNOLOGY

L	T	P	*Curri. Ref. No. G206B*
2	1	2	

Total Contact hrs.:
Theory: 30
Tutorial: 15
Practical: 30
Credit: 4

Total marks: 100

Theory:
End Term Exam: 50
Practical:
End Term Exam: 25
P.A : 25

RATIONALE

Information Technology is an in-evitable part now-a-days. The discipline of Engineering is also being highly influenced by the recent development in the field of IT. This course emphasizes of the various components of Information Technology. The course deals with Hardware, Software and Communication technologies in brief these are the foundation of IT. It therefore becomes important for the students to understand the concept and develop necessary skills in different aspects of information technology.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC/SUB-TOPIC	Lecture Hrs.
1.0	Introduction to IT - its components computer, communication & management	03
2.0	Introduction to Number System, Bits, Bytes, Word, Logical Gates, Truth Table, ASCII, BCD, Floating point and Fixed Point number represeantation.	06
3.0	Introductory ideas about the components of computer - Hardware - Central Processing Unit, Input Unit, Output Unit, Memory Unit, Auxiliary Unit, Peripherals - Monitor, Keyboard, Mouse, Printer, Hard disk, CD / DVD, USB storage devices, Micro SD Cards, etc. Software and firmware building blocks of a computer, its function and its use. Role of operating system.	08
4.0	Classification of software - System Software, Application Software Translator - Compiler, Interpreter, Preprocessor Operating System - Single User, Multiple User Windows XP/Vista / 7 / 8 - Definition of Windows, Windows element, Concept of Graphical user Interface, Concept of Icon, Working with File Management, Concept of GUI based software; concept of client & server, concept of www, Internet services, use of standard browsers, basics of HTML and searching.	06

5.0	Computer communication interface, introductory concepts of networking, Transmission media – Wired and Wireless, use of Modem Concept of LAN, WAN, Internet, Intranet, Email.	07

PRACTICAL:

Suggested demonstration / tasks :

1.	Introduction to MS Office Basic features of Ms Office, Overview of Different Office Tools	01
2.	Introduction to MS Word Creating and Editing document, Formatting Documents, Working with Tables, Spell checking, Mail Merging, Importing Graphics into word Document	08
3.	Introduction to MS Excel Creating a New Work Book, Entering Labels, Values and Formulas, Formatting the layout, Working with Functions, Creating the Chart from data, Writing macros	09
4.	Introduction to Power Point Creating a Presentation, Adding/Editing Text, Working with objects, Formatting the Presentation, Placing the chart in slide, Slide Show and Printing	07
5.	Internet Browsing and Emailing Internet surfing and browsing, searching content from the Internet using search engines, Email – account opening, composition of e-mails, searching mails, forward and reply of mails	05

SUGGESTED LEARNING RESOURCES

Reference Books :

1. Fundation of Information Technology – by D.S. Yadav, New Age International Publisher
2. Learning Computer Fundamentals, Ms Office and Internet & Web Tech – By Dinesh Maldasani, Firewall Media
3. Computer Applications and C Programming – by S.K. Das and S. Ghosal, Platinum Publishers.
4. Computer Fundamentals and Programming in C – by J.B. Dixit, Laxmi Publication
5. Reference Manual for Ms. Office.

LIST OF EQUIPMENT

Hardware : PC connected in Local Area Network
(for detail, please refer Annex – I)

Software : Ms Office Latest Edition

Internet : Internet Connectivity through Broadband or Leased Line

BASIC GARMENT FABRICATION

L	T	P	***Curri. Ref. No.: GFT205***
2	1	2	

Total Contact hrs.:
Theory: 30
Tutorial: 15
Practical: 30
Credit: 4

Total marks: 100

Theory:
End Term Exam: 50
P.A.: 0
Practical :
End Term Exam: 25
P.A.: 25

RATIONALE

Every fashion designer should essentially learn to fabricate the garments for which they have prepared drafting and patterns using the machine tools and equipments. It is very essential that they should be able to fabricate various components of fashion.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	TECHNICAL TERMS Words used in technical trade	1L+1T
2.0	BASIC SEWING TECHNIQUES Basting, Tacking, Thread Marking, Hemming, Lock Stitch, Eye hole, Loops, Button – hole, Fasteners, Zip attaching. Seams-Plain, French, Run and Fell, Counter hem, Lapped, Mantua Maker, Flannel, Over cast, Pinked. Binding Bias & Straight facings.	2L+1T
3.0	TUCKS, DARTS AND PLEATS	2L+1T
4.0	K LINES & COLLARS Necklines – V-shape, U-shape, Round, Square, Glass. Collars-Peter pan collar, Creaton collar, Square Neck collar, Reverse collar, One scallop flat edge collar, Flat back collar, Boat collar, Double turning collar, Scalloped collar Tucked collar, Flared collar, Shirt collar, Stand collar, Double breast collar, Flat collar.	5L+2T
5.0	YOKES Round yoke, U-shape yoke, Square yoke, V-yoke, Double pointed yoke, scalloped yoke.	2L+1T

6.0	SLEEVES Short pleated type sleeves, Puff sleeves, Three quarter sleeves, Full sleeves, Bishop sleeves, Raglan sleeves, Magia sleeves, Kimono sleeves or Dolman sleeve.	5L+2T
7.0	POCKET Patch pocket, Cut pocket, Diagonal attach pocket, Flap pocket, Side pocket.	3L+1T
8.0	PRINCIPLES OF TAILORING Straightening of fabric. Fabric preparation for cutting, Stitching and Finishing.	5L+2T
9.0	NEEDLE WORK Equipments used in Needle work. Method of Design Transferring. Pencil Method. Carbon Method. Trace-Line Method. Pouncing Method.	2L+2T
10.0	DIFFERENT TYPES OF BASIC STITCHES Line Stitches-Running Stitch, Stem Stitch, Overcast Stitch. Chain stitches-Chain, Lazy-Dazy, Cable chain, Open chain, Chequered chain, Twisted chain, Zigzag chain, Double chain. Loop stitch-Button hole, Creaton, Feather, Roman, Fly. Flat stitches-Fish Bone, Herring Bone, Chevron, Satin, Long & Short, Roumanian Knotted Stitches-French knot, Bullion knot, Coral knot, German Knot. Couching Stitch-Simple couching, Jacobion couching, Bokhara couching	3L+2T

SUGGESTED IMPLEMENTATION STRATEGIES

As this is a skill based course sufficient time should be given for hands on practice. Different types of samples should be shown in the classroom.

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
Basic process and clothing construction	S Doongaji & R.Deshpande; Raaj Prakashan;6th;1990
Rapidex Home Tailoring Course	Asha Rani Vohra; Pustak Mahal;1st;2000
Tailoring	Allyne Bane; McGraw-Hill; 1st;1958
Creative Sewing	Allyne Bane; McGraw-Hill; 1st;1956
The Bishop method of clothing construction	Edna Bryte Bishop; Pitman ;5th; 1964
The art of sewing	Anna Jacob Thomas; UBS Publishers; 1995
Fundamentals of Clothing Construction	Labanya Mazumdar & R. Vaisala; ICAR;2004

(b) Others:

- Samples of basic sewing techniques
- Samples of collars, pockets, neckline etc.
- Samples of seams

PRACTICAL:

Suggested list of assignment/activities:

- Practice preparation of fabric before cutting, stitching, and finishing.
- Preparation of samples by using all the stitches.
- Prepare samples of any 5 collars, 5 pockets, 5 neck lines & 5 Yokes.
- Preparation of basic bodice, basic skirt, basic sleeve
- Preparation of simple variation (A-line, flare, umbrella skirt)
- Preparation of advanced variation

MATERIAL STUDIES

L	T	P	*Curri. Ref. No.: GFT206*
2	1	2	

Total Contact hrs.:
Theory: 30
Tutorial: 15
Practical: 30
Credit: 4

Total marks: 100

Theory:
End Term Exam: 50
P.A.: 0
Practical :
End Term Exam: 25
P.A.: 25

RATIONALE

As students are getting trained in design and most probably are going to be using various materials in their professional practice. They must get holistic information on the material, properties and usage. They must have an overall understanding about the professional practices worldwide with respect to materials.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Total Hrs.
1.0	**UNIT – I :MATERIAL: PAPERS** - Learning about the types of papers/boards, properties and uses. (e.g. Differences between News Print / Foreign Art Board / Snow white etc.) About international sizes and varieties of papers **Practical workshop:** Create a portfolio of paper/board samples through sourcing along with details and costs wherever possible (approx. 15 samples) - Introduction to Origami/Kirigami or similar methods **Practical workshop:** Origami (2 artwork of size approx. 15cm x 15cm x 15cm) Introduction to Paper Mache or similar methods. (to create awareness regarding environment issues/recycling with respect to paper. **Practical workshop:** Make 2 Paper Mache utilitarian articles (approx. size 15cm x 15cm x 15cm)	**8L+3T+8P**
2.0	**UNIT – II : MATERIAL: YARNS** - Introduction to yarns and types used in yarn crafts. Region wise introduction of Indian traditional yarn crafts.	**10L+6T+10P**

	Practical workshop: Braiding /Plaiting [3-strand braid, Interlace braid, Half Knot chain] - Region wise introduction to International yarn crafts. **Practical workshop:** (1) Square knot / flat knot chain (2) Alternating square knots (3) Right hand / left hand vertical half hitch - On value addition for different knots/braiding methods learnt. Uses in the industry. **Practical workshop:** (1) Josephine knot (2) Square knots with beads / rings, Square knot button / decorative bobble (3) Knotting on wire / bangle/ any other core (material exploration – minimum 3 different materials) *Note: let the students create their own composition- Faculty member has to encourage their creativity. Only guidance is required.*	
3.0	**UNIT – III : MATERIAL: METAL** - Introduction to Gold, Silver, Platinum (Designer application) - Introduction to Lurex (zari)/wires/rods etc. (Designer application) - Procedures related to metallic Staining. **Practical workshop:** Stain different types of metal sheets using suitable methods. Size: 10 cm x 10 cm .5mm thick. Metal sheets of 3 different metals (Aluminium, brass, copper) - Introduction to aluminium, copper, steel & brass (industrial application), properties and uses - Traditional/manual manufacturing procedures compared to modern / mechanized manufacturing procedures. - Suitability of the procedures with respect to design - Input with respect to simple methods like Drilling, Riveting, Soldering, etc. **Practical workshop:** A small composition using the methodologies taught. (size 10cm x 10cm x 10cm) Materials: Metal sheets – Brass/Aluminium / Copper .5 mm thickness *Note: let the students create their own composition- Faculty member has to encourage their creativity. Only guidance is required.* - Finishing methodologies used in the fashion industry. Eg. Press buttons, Fancy zippers, jewellery etc. - Input with respect to simple finishing methods - filing, buffing, polishing etc. **Practical workshop:** A small product incorporating most of the methodologies taught. Eg. Attaching wires /rods of different dimensions to metal sheets to produce a product. (size 15cm x 15cm x 15cm) Materials: Metal sheets – Brass/Aluminium / Copper	**12L+6T+12P**

	to be included along with wires / rods of different dimension. *Note: let the students create their own composition- Faculty member has to encourage their creativity. Only guidance is required.*	

SUGGESTED IMPLEMENTATION STRATEGIES

- Lecture, demonstration (Faculty, Experts / craftsmen)
- Methodology based individual assignments
- Exploration and presentation
- Field visit/ industry visit with respect to each of the materials
- Review and feedback by faculty

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Paper craft: Design and art with paper	R Klanten, S Ehmann, H Baltzer, S Moreno
2. Plastic as an art form	T. R. Newman, Chilton Book Co.; 1st edn.,1966
3. Material Science	V. Raghvan Thelmar, Phi Learning, 5th edn. 2009
4. Sculpture: tools, materials & techniques	Verhelst, Wilbert, Prentice Hall; 2nd edn. , 1988
5. Workshop Technology – Vol. I &II	Hazra Choudhary, Asian Book, New Delhi, 1998.

Others:
Web reference : www.wikipedia.com

PRACTICAL:

Details given in respective units

SOFT CORE COURSES

ENVIRONMENTAL EDUCATION

L	T	P	*Curri. Ref. No. G301*
3	0	0	

Total Contact hrs.: ***Total marks: 100*** **Theory:**

Theory: 45 End Term Exam: 75

Tutorial : 0 P.A.: 25

Practical : 0

Credit: 3

RATIONALE

Management of Environmental Degradation as also its control using innovative technologies is of prime importance in the times we are living in. Since the days of the famed Rio Summit (1992) awareness about degradation of environment we live in an its management through participation of one and all has literally blossomed into a full fledged movement of universal importance. Technically qualified people, such as the Diploma Engineers, should not only be aware about new technologies to combat environmental degradation at their disposal but also various aspects of environment, ecology, bio-diversity, management, and legislation so that they can perform their jobs with a wider perspective and informed citizens. This course can be taken by all diploma students irrespective of their specializations.

DETAILED COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.
1.0 INTRODUCTION	**2**
1.1 Introduction 1.2 Environment and its components 1.3 Environment in India 1.4 Public Awareness	
2.0 ECOLOGICAL ASPECTS OF ENVIRONMENT	8
2.1 Ecology • Eco-system • Factors affecting Eco-system	
2.2 Bio-geochemical cycles • Hydrological cycle • Carbon cycle • Oxygen cycle • Nitrogen cycle • Phosphorous cycle • Sulphur cycle	

2.3 Bio-diversity
2.4 Bio-diversity Index

3.0 NATURAL RESOURCES 5

3.1 Definition of Natural Resources
3.2 Types of Natural Resources
3.3 Quality of life
3.4 Population & Environment
3.5 Water Resources
- Sources of Water

3.6 Water Demand
3.7 Forest as Natural Resource
- Forest and Environment
- Deforestation
- Afforestation
- Forest Conservation, its methods

3.8 Land
- Uses and abuses of waste and wet land

4.0 GLOBAL ENVIRONMENTAL ISSUES 9

4.1 Introduction
4.2 Major Global Environmental Problems
4.3 Acid Rain
- Effects of Acid Rain

4.4 Depletion of Ozone Layer
- Effects of Ozone Layer Depletion

4.5 Measures against Global Warming
4.6 Green House Effect

5.0 ENVIRONMENTAL POLLUTION 9

5.1 Introduction
5.2 Water Pollution
- Characteristics of domestic waste water
- Principles of water treatment
- Water treatment plant (for few industries only- unit operations & unit processes - names only)

5.3 Air Pollution
- Types of air pollutants
- Sources of Air Pollution
- Effects of Air Pollutants

5.4 Noise Pollution
- Places of noise pollution
- Effect of noise pollution

6.0 CLEAN TECHNOLOGY 6

6.1 Introduction to Clean Technologies
6.2 Types of Energy Sources
- Conventional Energy sources
- Non-conventional sources of Energy

6.3 Types of Pesticides
6.4 Integrated Pest Management

7.0 ENVIRONMENTAL LEGISLATION 3

7.1 Introduction to Environmental Legislation
7.2 Introduction to Environmental Laws

8.0 ENVIRONMENTAL IMPACT ASSESSMENT 3

8.1 Introduction to Environmental Impact Assessment
8.2 Environmental Management (elements of ISO 14001)
8.3 Environmental ethics

SUGGESTED IMPLEMENTATION STRATEGIES

The teachers are expected to teach the students as per the prescribed subject content. This subject does not have any practical but will have only demonstration and field visit as stated. The students will have to prepare report of the site visit.

SUGGESTED LEARNING RESOURCES:

(a) Reference Books:

S. No.	Title	Author, Publisher, Edition & Year
1.	Environmental Engineering	Pandya & Carny, Tata McGraw Hill, New Delhi
2.	Introduction to Environmental Engineering and Science	Gilbert M. Masters Tata McGraw Hill, New Delhi
3.	Waste Water Engineering – Treatment, Disposal & Reuse	Metcalf & Eddy Tata McGraw Hill, New Delhi
4.	Environmental Engineering	Peavy, TMH International New York
5.	Study / training materials, references, reports etc. developed by Central Pollution Control Board, New Delhi as also State Pollution Control Boards	Central Pollution Control Board Postal Address: Parivesh Bhawan, CBD-cum-Office Complex East Arjun Nagar, DELHI - 110 032, INDIA Tel.: 91-11-22307233 Fax: 91-11-22304948 e-mail: ccb.cpcb@nic.in
6.	Environmental Science	Aluwalia & Malhotra, Ane Books Pvt. Ltd, New Delhi
7.	Text Book of Environment &	Sing, Sing & Malaviya, Acme Learning, New

S. No.	Title	Author, Publisher, Edition & Year
	Ecology	Delhi
8.	Environmental Science & Ethics	Sing, Malaviya &Sing , Acme Learning, New Delhi
9.	Environmental Chemistry	Samir K. Banerji, Prentice Hall of India, New Delhi

(b) Others:

1. Text book mentioned in the references
2. Lab Manuals
3. OHP Transparencies
4. Video film on Environment

SUGGESTED LIST OF DEMONSTRATIONS/FIELD VISIT

- pH value of water sample.
- Hardness of water
- Calcium hardness
- Total Hardness
- Residual Chlorine to a given sample of water
- Turbidity
- B.O.D.
- C.O.D.

Visits: Following visits shall be arranged by the teachers during the semester:

- Water Treatment Plant
- Sewage Treatment Plant
- Maintenance work of water supply mains and sewage system

PRINCIPLES OF MANAGEMENT

L	T	P	*Curri. Ref. No. G302B*
3	0	0	

Total Contact hrs.: ***Total marks: 100*** **Theory:**

Theory: 45 End Term Exam: 75

Tutorial :0 P.A.: 25

Practical : 0

Credit: 3

RATIONALE

Management is the integrated component of all areas of technological courses as recognized across the world. Technicians or supervisors coming out of the system hence need to study the basics components of the management relevant to them. Principals of management will enable them to apply basic knowledge of management in their field of work. Keeping with this in mind necessary content details of the course on Principles of Management has been developed. With the assumption that, it will develop some management foundation to the diploma students.

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.
a. FRAMEWORK OF MANAGEMENT	**8**
1.1 Nature of management	
1.2 Development of management thoughts	
1.3 Management and process skills	
2.0 PLANNING	**9**
2.1 Fundamentals of planning	
2.2 Planning premises and forecasting	
2.3 Decision making	
2.4 Mission and objective	
3.0 ORGANIZING	**10**
3.1 Fundamentals of organizing	
3.2 Design of organization structure	
3.3 Forms of organization structure	

3.4 Power and authority

3.5 Authority relationship

4.0 STAFFING **8**

4.1 Fundamentals of staffing

4.2 HR planning

4.3 Recruitment and selection

4.4 Training and development

4.5 Performance appraisal

5.0 DIRECTING **6**

5.1 Fundamentals of directing

5.2 Operational control techniques

5.3 Overall control technique

6.0 TOTAL QUALITY MANAGEMENT 4

6.1 Concepts and definitions

6.2 Sages of quality gurus and their contributions

6.3 Basic tools of TQM

SUGGESTED LEARNING RESOURCES:

Reference books:

1. Principles of management, by: T.Ramasamy (Himalya publishing house)
2. Management by: S. P. Robins
3. Management principles by: Anil Bhat and Arya Kumar
4. Principles and practice of management by LM Prasad
5. Principles of management by LM Prasad
6. Essentials of Management / Joseph L. Massie / Prentice-Hall of India

ORGANIZATIONAL BEHAVIOUR

L	T	P	*Curri. Ref. No.:G302D*
3	0	0	

Total Contact hrs.: ***Total marks: 100*** *Theory:*
Theory: 45 End Term Exam: 75
Tutorial :0 P.A.: 25
Practical: 0
Credit: 3

RATIONALE

Knowledge in behavioural principles in an organization is an important requirement because concepts such as work motivation, behavioural patterns of individuals as also those of group of individuals etc are intimately related to it. Organizational Behavioural principles, its scopes, applicability etc. are therefore important to know by the students irrespective of the branch of specialization. Based of the above facts following content details of the subject on Organizational Behaviour has been suggested.

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.
1.0 ORGANIZATION:	**8**
Concept and Definition	
Structures (line, staff, functional divisional, matrix)	
2.0 MOTIVATION :	**10**
Principles of Motivation	
Aspects of Motivation	
Job motivation	
Theories of motivation (Maslow, Herzberg, Theory of X&Y of Mc. Gregar)	
3.0 DEVELOPING GOOD WORK HABITS:	**10**
Principles of habit formation	
Attitude and values	
Personality-	

- Concepts

- Theories

- Personality and Behaviour

4.0 ORGANIZATIONAL CULTURE: 8

Concepts and its importance

Determinants of organizational culture

Rules & regulations

5.0 TEAM BUILDING: 9

Concepts
Team and Group

Formation of Team building

SUGGESTED LEARNING RESOURCES:

Reference Books:

1. Organisational Behaviour — An introductory Text – Huezynski A. & Bucheman C. (Prentice Hall of India)
2. Image of Organisation — Morgan G. (Sage)
3. Understanding Management — Linstoand S. (Sage)
4. Organizational Behaviour — Robbins (Prentice Hall of India)
5. Understanding and Managing – Organizational Behavior — George & Jones
6. Organisational Behaviour, L.M. PRASAD, New Delhi, Sultan Chand & Sons
7. Essentials of Management — Koontz (Tata McGraw Hill)

MARKETING MANAGEMENT

L	T	P	***Curri. Ref. No.:GFT301***
3	0	0	

Total Contact hrs.:
Theory: 45
Tutorial :0
Practical: 0
Credit: 3

Total marks: 100

Theory:
End Term Exam: 75
P.A.: 25

RATIONALE

Marketing Management is a discipline which is focused on the practical application of marketing techniques and the management of an organization's marketing resources and activities. Pass out from some diploma courses are sometimes given the responsibility as marketing manager. Some basic concepts of marketing management in this regard are very essential. Keeping this in view following content has been suggested incorporating latest development of the subject.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**INTRODUCTION TO MARKETING**	**2**
	Meaning, definition, scope and importance of marketing	
	Meaning of market, types of market	
2.0	**MARKET SEGMENT**	**2**
	Meaning & process of market segmentation	
3.0	**MARKETING FUNCTIONS**	**3**
	Buying, selling, grading, branding, assembling functions	
4.0	**PRICING**	**8**
	Meaning, importance of pricing, factors affecting price change	
	Price determination process	
	Pricing policies- skimming price, penetration price, cost plus price, psychological price, charging what the public will bear	
5.0	**DISTRIBUTION**	**8**

Meaning, importance of channels of distributions

Functions of channels of distributions

Functions & types of mercantile agents

6.0 SALESS FORECUSTING **5**

Meaning, objectives, methods of sales forecasting

7.0 SALES PROMOTION **4**

Meaning, objectives

Kinds of sales promotion- consumer's sales promotion and dealer's sales promotion

8.0 SALES MANAGEMENT **6**

Meaning, definition & scope of sales management

Process of selling

Selection, compensation, training, motivating sales staff

9.0 ADVERTISING **7**

Meaning, definition, role of advertising

Advertising media, media planning, types of media

Effectiveness of advertising

Social, economic impacts of advertising

SUGGESTED LEARNING RESOURCES:

Reference Books:

1. Marketing Management - S.A. Sherlekar, Himalaya Publishing House
2. Marketing Management - Rajan Nair
3. Principles of marketing - P. Kotler & Armstrong, Prentice Hall, New Delhi
4. Marketing -J.C. Gandhi - Tata Mc. Graw. Hill, New Delhi
5. Marketing Management by C.N. Santokki, Kalyani Publishers
6. Marketing Communication & Advertising, Bhatia, R.C., New Delhi: Gargotia Publishing Co., 2003
7. Consumer Behaviour in Indian Context, Srivastava, K. K. & Sujatha, K., New Delhi: Galgotia Publishing Co., 2003

INTELLECTUAL PROPERTY RIGHTS

L	T	P	***Curri. Ref. No.: GFT302***
3	0	0	

Total Contact hrs.: ***Total marks: 100***

Theory: 45
Tutorial: 0
Practical: 0
Credit: 3

Theory:
End Term Exam: 75
P.A.: 25

RATIONALE

We encounter intellectual property at every step of our life today as everything that we use is the product of man's ingenuity, knowledge and skill, besides labour and capital: hence it falls under some kind of intellectual property that had to be respected before the item could be lawfully manufactured. This course includes the basic concept behind intellectual property rights, types of property rights like copyright, trademarks, patents, industrial design etc.

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.
1.0 Introduction -Invention and Creativity – Intellectual Property (IP) – Importance –Protection of IPR – Basic types of property: Movable Property, Immovable Property and Intellectual Property.	**15**
2.0 IP – Patents – Copyrights and related rights – Trade Marks and rights arising from Trademark registration – Definitions Protection of Geographical Indications at national and International levels – Application Procedures.	**15**
3.0 International convention relating to Intellectual Property – Establishment of WIPO – Mission and Activities – History – General Agreement on Trade and Tariff (GATT) –TRIPS Agreement.	**15**
4.0 Indian Position Vs WTO and Strategies – Indian IPR legislations – commitments to WTO-Patent Ordinance and the Bill – Draft of a national Intellectual Property Policy –Present against unfair competition.50	**15**
5.0 Case Studies – Patents – Copyright and related rights – Trade Marks – Industrial design and Integrated circuits – Geographic indications – Protection against unfair competition.	**15**

SUGGESTED LEARNING RESOURCES

Reference Books:

1. Eli Whitney, United States Patent Number: 72X, Cotton Gin, March 14, 1794.
2. Subbaram N.R. "Handbook of Indian Patent Law and Practice ", S. Viswanathan Printers and Publishers Pvt. Ltd., 1998
3. Debirag E.Bouchoux: "Intellectual Property". Cengage learning , New Delhi
4. M.Ashok Kumar and Mohd.Iqbal Ali: "Intellectual Property Right" Serials Pub.
5. Cyber Law. Texts & Cases, South-Western's Special Topics Collections
6. Prabhuddha Ganguli: ' Intellectual Property Rights" Tata Mc-Graw –Hill, New Delhi

BASIC TECHNOLOGY COURSES

STYLE READING, PATTERN MAKING & ADAPTATION

L	T	P	***Curri. Ref. No.:GFT401***
2	1	4	

Total Contact hrs.:
Theory: 30
Tutorial :15
Practical: 60
Credit: 5

Total marks: 150

Theory:
End Term Exam: 50
P.A.: 0
Practical:
End Term Exam: 50
P.A.: 50

RATIONALE

The students of fashion technology should be able to appreciate our ancient civilization, the fashion existing in the different periods, their contribution in shaping the present and promoting the future trends in the field of fashion. After going through this subject, they will be able to illustrate different types of figures and dresses.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**DESIGN ANALYSIS** - Reading the detail design, - Preparing and reading instruction sheets / work sheet, - Principles of pattern making - Preparation of basic blocks for men, women and children, - Preparation of blocks in different sizes, - Pattern alterations, - Relocating draft and seams, - Dart manipulation and disposal of fullness by flat pattern methods.	**10L**
2.0	**DRAPING** Principles of draping, dart manipulation, drape effects and disposal of fullness	**06L**
3.0	**ADAPTATION** - Adaptation of basic blocks to garments for men, women and children, - Principles and methods of adapting basic blocks to create new designs.	**08L**
4.0	**GRADING** Principles of grading to different sizes and marking of patterns	**06L**

SUGGESTED IMPLEMENTATION STRATEGIES

- Hands on practice with machines
- Reading of design details

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Pattern Making for Fashion design	H. Joseph Armstrong, Prentice Hall , 4th edn., 2005
2. The ABC's of Grading	Murray Sacheir, Scheier, 1974
3. Basic Pattern Skills for Fashion Design	Bernard Zamkoft, Fairchild; 2nd edn, 2009
4. Design Apparel Through the Flat Pattern	Ernestine Kopp, Fairchild; 6th edn., 1991
5. Easy Cutting	Juvekar, Bal company, Mumbai
6. Zarapkar System of cutting	Gala Publishers, Mumbai.
7. Handbook of Fashion Designing	Rithu Jindal-Mittal Publications, New Delhi
8. Basic Process of clothing construction	Sherie Doongaji, New Raj Book Depot, New Delhi

PRACTICAL:

Suggested list of assignment/activities:

1. Reading the design details.
2. Make basic standard block using flat pattern methods, with basic darts, balance lines, notches, grain indication, size seam and other markings. Make basic block of bodice, skirt, blouse (hip length), half sleeves, full sleeves, kimono princes line, under garments, night dresses. Grade the basic blocks to different sizes.
3. Practice dart manipulation on fabric by flat patterns on paper.
4. Practice of using print and weave distribution to create style.
    - Different necklines - Round, Square, Haute Shape, Cowl, Novelty.
    - Collars - Cape, Bow, Sailor, Peterson, Chinese, Polo.
    - Yokes - On Shoulder, Necklines, Waist and Hip Novelty.
    - Fastenings - Different types of Plackets, Openings and Closing, Fasteners and their Utility.
    - Sleeves - Drop Shoulder, Raglan, Kimono, Dolman, Set-In Sleeves, Puff, Cap, Cuffed, Bell, Over-Lapping, Bishop, Etc.
    - Skirts - flared, paneled, straight, pleated, umbrella
5. Patterns for children's wear
6. Patterns for men's wear
7. Patterns for ladies wear

SURFACE ORNAMENTATION TECHNIQUES

L	T	P	***Curri. Ref. No.:GFT402***
2	1	4	

Total Contact hrs.:
Theory: 30
Tutorial :15
Practical: 60
Credit: 5

Total marks: 150

Theory:
End Term Exam: 50
P.A.: 0
Practical:
End Term Exam: 50
P.A.: 50

RATIONALE

This course will enable the learners to understand the different types of textile and surface ornamentation designs and techniques and to use them effectively and designing the garments. The course also includes various methods of surface ornamentation and selection of appropriate method of ornamentation for a specific product or fabric.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**FAMILIES OF TEXTILE DESIGN** - Floral - Geometric - Conversational/Traditional - Ethnic	**6L**
2.0	**REPEAT AND ITS TYPES** - Directional - Non-Directional - One way - Two way - All over - Half Drop Vertical - Half-Drop Horizontal.	**6L**
3.0	**PRINT S TECHNIQUES** - Block Printing - Stencil Printing - Fabric Printing - Lithography - Screen Printing	**6L**
4.0	**TOOLS AND TECHNIQUES**	**6L**

	- Design transfer materials, - Sources & interpretation - Choosing color - Enlarging and reducing design	
5.0	**EMBROIDERY** - Outline stitches - Border stitches - Variation of cross stitches - Composite band stitches - Types of isolated stitches - Open filling stitches - Solid filling stitches - Insertion stitches - Edging stitches - Cut and drawn stitches - Ribbon embroidery	**6L**

SUGGESTED IMPLEMENTATION STRATEGIES

- Lecture, demonstration, practical exercises, and interactive Sessions
- Practical explorations

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Textile Design	Susan Meller & Joost Q. Elffers
2. Encyclopedia of embroidery stitches including crewel	Marion Nicholas
3. Quilters work book	Pam Lonttot & Rosemary
4. Batik designs	Sigrid W. Weltge

PRACTICAL:
Suggested list of assignment/activities:

Students should maintain a record having at least one sample of each stitch / design based on stitches or any of the surface decoration techniques.

CAD IN FASHION TECHNOLOGY

L	T	P	***Curri. Ref. No.:GFT403***
2	1	4	

Total Contact hrs.:
Theory: 30
Tutorial :15
Practical: 60
Credit: 5

Total marks: 150

Theory:
End Term Exam: 50
P.A.: 0
Practical:
End Term Exam: 50
P.A.: 50

RATIONALE

The objective of this course is to incorporate in design students the ability to represent and create visuals using image editing and object creation / manipulation capabilities of Adobe Photoshop, Corel draw and similar computer aided design software.

DETAIL COURSE CONTENT

THEORY:

UNIT	**TOPIC / SUB-TOPIC**	**Lecture Hrs.**
1.0	Introduction and meaning for CAD, Computer and the Fashion industry. Acceptance of new technology. Quick response technology.	4L
2.0	CAD in fashion industry. Types of CAD systems – Textile design system, illustration / sketchpad system. Texture mapping – Draping software, Embroidery system, Specification and costing system. Digitizing and grading system, marker-making systems, pattern Design software, robotics and Garment moving Technology. Commercial software systems.	8L
3.0	CAD from sketch to market – Conceptualization – Definition – Preproduction, Production and Promotion.	4L
4.0	Silhouette – Introduction, Fashion cycle, understanding shape, fabric selection and silhouette – proportion, line, focal point, cut, fit and construction, coordinating silhouette. Rendering silhouette. Computer rendering of silhouette.	6L
5.0	Presentation and Graphics: Introduction, External presentation, internal presentation, planning a presentation – organization and composition. Computer generated presentation, computer generated catalogues, presentation board, Multimedia and 3 – D presentation.	8L

SUGGESTED IMPLEMENTATION STRATEGIES

- Class room lecture and discussion

- Computer assisted presentations
- Hands on practice on computers

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Respective software manuals (Adobe Photoshop, Corel draw)	
2. Photoshop Retouching Techniques	Eismann, Katrin, Simmon, Steve Publisher
3. Teach Yourself Access for Windows	Siegel, Charles , BPB Publications, New Delhi
4. CAD for Fashion Design	Rene Weiss Chase., Prentice Hall, London.

PRACTICAL:

Suggested list of experiment :

1. Developing motifs using coral draw and adobe Photoshop.
2. Developing weave patterns for dobby weave
3. Developing weave patterns for jacquard weave
4. Developing motifs for embroidery and cross stitch
5. Developing motifs for screen printing
6. Developing patterns for pattern making and grading
7. Developing design library for garment details (Skirts, Sleeves, Cuffs, Collars, and Pockets)
8. Developing garment designs for children’s garment with colour combination
9. Developing garment designs for men’s garment with colour combination
10. Developing garment designs for women’s garment with colour combination
11. Texture mapping using computers (Changing different textures of garment)
12. Bringing variation in face framing details using computers (Changing accessories, hair style, hat, necklines, eye glasses, Make ups)

FASHION ILLUSTRATION

L	T	P	***Curri. Ref. No.:GFT404***
3	1	4	

Total Contact hrs.:
Theory: 45
Tutorial :15
Practical: 60
Credit: 6

Total marks: 200

Theory:
End Term Exam: 75
P.A.: 25
Practical:
End Term Exam: 50
P.A.: 50

RATIONALE

This course will enable the learners to acquire the skills to use different mediums: - pencil, water color, poster color, etc. and understand the texture of fabric. They will also be able to develop types of rendering and learn to analyze variety of pictures and sketch and render them accordingly (body & garments).

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**RENDERING TECHNIQUES** - Pencil - Steadler and Color Pencil - Charcoal - Water Color - Poster Color - Oil and Acrylic	**6L**
2.0	**FABRIC RENDERING** - (30samples of different varieties of fabric)	**6L**
3.0	**WORLD ART APPRICIATION** - Ancient world - Middle ages - Modern art	**10L**
4.0	**PHOTO ANALYSIS** - Different garments of Kids, - Male and Female	**5L**
5.0	**DEVELOPMENT OF COSTUMES**	**4L**

	- on croquis using elements of fashion (min-5)	
6.0	**BODY MOVEMENTS** (kids, female and male) (different angles- 5 with all details) - Leg and hand movement - Face drawing and detailing - Feature drawing - Actions - Poses and composition	**6L**
7.0	**STYLIZED RENDERING**	**4L**
8.0	**FLATS & SPEC SHEETS**	**4L**

SUGGESTED IMPLEMENTATION STRATEGIES

- Substantial uses of demonstration of sketches are to be made to make learning interesting.
- Hands on practice using different media on drawing/sketch books
- Computer assisted sketches

SUGGESTED LEARNING RESOURCES

Reference Books :

Title	Author; Publication; Edition; Year
1. Fashion design & illustration	Pradeep Kumar
2. Fashion Illustration	Neetu Sharma
3. Costumes & Textiles of Royal India	Patric John Ireland
4. Inside fashion design	Sharon Lee Tate
5. Advance Fashion sketch book	Bina Abling
6. Fashion Illustration	Colin Barnes / Steven Stipelman
7. Figure Drawing for Fashion I & II	Isao Yajima
8. Fashion Illustration Today	Nicholas Drake
9. Fashion Art for the Fashion Industry	Rita Gersten
10. One Hundred Drawings.	Gustav Klimt; Dover; Reprint ; 1972
11.The Art of the Renaissance	Peter Murray, Linda Murray; Thames & Hudson ; Reprint ; 1963
12. Costume & Fashion in Colour:1550-1760	Jack Cassin-Scott, Ruth M. Green; Blandford Press; Reprint ;1975

PRACTICAL:

Suggested list of assignments / activities :

1. Introduction to art media and its applications- different art media- pencils, erasers, colours, poster, fabric, water, pencil, oil pastels, charcoal pencils.
2. Free hand drawing and colour rendering of objects (one for each category)
   - Natural shapes and forms, landscapes.
   - Realistic and abstract patterns.
3. Colour preparation of colour wheel, tints, tones, shades, different colour schemes.
4. Fashion model drawing basic figure proportion (croqui, heads, ears, nose, legs, arms and hairstyles)
5. Figure drawing in S, X, T, Y poses.
6. Rendering of different textures: woven, woolen, knitted, satin, fur, leather, net, denim, Adapting period costume to contemporary use

DRAFTING, CUTTING & STITCHING (MEN)

L	T	P	***Curri. Ref. No.:GFT405***
0	1	4	

Total Contact hrs.: ***Total marks: 100*** *Practical:*

Theory: 0 End Term Exam: 50

Tutorial :15 P.A.: 50

Practical: 60

Credit: 3

RATIONALE

This is a practical course for developing tailoring and stitching skills for men's wear. In this course the student will learn to fabricate simple men's garments for which they have prepared drafting and patterns.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	- Technical terms used in gents garments - Various methods of taking measurements as direct system measurement from stitched, garments, chest measurements correct methods of taking measurements for shirt, pant, jacket and coat	4T
2.0	- Normal, abnormal, proportionate and disproportionate. Different types of male figures. Study of human body with reference to muscles, joints and organs related to dress making. - Principles of balancing garments, correct balance, wrong balance importance of balance. - Knowledge of making patterns, indication marks, grain lines, guide lines, balance marks, notches, cuts, and other points in pattern as darts, tucks pleats, gathers	6T
3.0	- Stitching of men's garment	5T

SUGGESTED IMPLEMENTATION STRATEGIES

This is a highly practical oriented course and hence stress should be on hands-on-practice and insist on neatness.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Rapidex home tailoring course	Asha Rani Vohra
2. Commercial system of cutting	Bal & Co.
3. A system of cutting	K.R. Zarapkar
4. Clothing	K S Doongerkery
5. Creative sewing	Aiiyn Bane
6. Practical clothing construction	M Mathews
7. Tailoring and dress making	R D Mehta and V B Jawakar
8. Easy clothing	V B Jawakar
9. Tailoring and dress making	R B Bhojak
10. Clothing construction	Shri Doongaji
11. How you look and dress	Bytra Carbon, McGraw Hill

Others:

- Drafting equipment
- Fashion Magazine
- Children dresses

PRACTICAL:

Suggested list of assignment / activities:

1. Economic layouts of gents garments
2. Estimation of cloth for cutting
3. Sample making – kali or mayani of pyjama
4. Pocket for pyjama, pocket for kurta, pockets for shirts and bush-shirts, open collar, two piece collar, button patti for shirts and kurta
5. Stitch men's garments such as sada pyjama, pant-cut pyjama, night suit, manila shirts, sada kurta with stand kalidar kurta, full sleeve shirts with cuff and half patti infront, different types of collars
6. Stitching of knickers, trousers, jackets

DRAFTING, CUTTING & STITCHING (CHILDREN)

L	T	P	***Curri. Ref. No.:GFT406***
0	1	4	

Total Contact hrs.: ***Total marks: 100*** *Practical:*

Theory: 0 End Term Exam: 50

Tutorial :15 P.A.: 50

Practical: 60

Credit: 3

RATIONALE

Today fashion design is not limited to adults. Even children garments have to be well designed. Children garments change according to age, activity and season. This paper will help the students to develop the skill of designing children garments.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**SELECTION OF CHILDREN GARMENTS** - Points to be kept in mind while selecting children garments - Factors affecting selection of children's garments - Selection of children garments according to age, activity - Self-help garments	**4T**
2.0	**CHILDREN GARMENT** - Future of children's garment - Effect of fashions in children's garments	**6T**
3.0	**DRAFTING & CUTTING** - Drafting and cutting of various children garments such as zabla, panty, romper, diaper, night dress, combination suit, etc.	**5T**

SUGGESTED IMPLEMENTATION STRATEGIES

Through this course it is intended to draft and cut different types of children garments. Hence, lots of hands-on-practice should be given to the students.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Rapidex home tailoring course	Asha Rani Vohra
2. Commercial system of cutting	Bal & Co.
3. A system of cutting	K.R. Zarapkar
4. Clothing	K S Doongerkery
5. Creative sewing	Aiiyn Bane
6. Practical clothing construction	M Mathews
7. Tailoring and dress making	R D Mehta and V B Jawakar
8. Easy clothing	V B Jawakar
9. Tailoring and dress making	R B Bhojak
10. Clothing construction	Shri Doongaji
11. How you look and dress	Bytra Carbon, McGraw Hill

Others:

- Fashion Magazine
- Fashion websites
- Children dresses

PRACTICAL:

Suggested list of assignments/activities:

Drafting and cutting of
- panty, diaper
- easy frock
- "A" line frock
- umbrella frock
- romper
- tunic
- skirt and top
- night dress
- combination suit

DRAFTING, CUTTING & STITCHING (WOMEN)

L	T	P	***Curri. Ref. No.:GFT407***
0	1	4	

Total Contact hrs. ***Total marks: 100*** *Practical:*
Theory: 0 End Term Exam: 50
Tutorial :15 P.A.: 50
Practical: 60
Credit: 3

RATIONALE

Fashion cycle for ladies garment change very rapidly. As a result a fashion technologist / designer should always innovate on ladies garment. This course particularly deals with selection of appropriate material, design according to the latest trends and draft pattern and stitch ladies garments.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	Social psychological aspects of female's clothing	4T
2.0	- Points to keep in mind while selecting ladies garments - Factors affecting selection of ladies garments - Selection of ladies garments according to age, activity	6T
3.0	Drafting of pattern making ladies garments	5T

SUGGESTED IMPLEMENTATION STRATEGIES

Fashion cycle for ladies garment change very fast. The student should be introduced to various new fashion magazines etc. a lot of hands-on- practice is also essential. Visits to various boutiques, fashion fairs, exhibitions are to be organized.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Rapidex home tailoring course	Asha Rani Vohra
2. Commercial system of cutting	Bal & Co.
3. A system of cutting	K.R. Zarapkar
4. Clothing	K S Doongerkery
5. Creative sewing	Aiiyn Bane

6. Practical clothing construction	M Mathews
7. Tailoring and dress making	R D Mehta and V B Jawakar
8. Easy clothing	V B Jawakar
9. Tailoring and dress making	R B Bhojak
10. Clothing construction	Shri Doongaji
11. How you look and dress	Bytra Carbon, McGraw Hill

Others:

- Fashion Magazine
- Fashion websites

PRACTICAL:

Suggested list of assignments / activities

Draft pattern and stitch the following ladies garments

- Skirts – straight, pleated, umbrella, paneled
- Blouses – high neck, plain, orabi, choli cut
- Churidar pyjama
- Salwar – any two types
- Ladies shirts, kameez any two types
- Night wear – night suits, nightie and gown
- Party wear

DRAPING

L	T	P	*Curri. Ref. No.:GFT408*
0	1	4	

Total Contact hrs.: ***Total marks: 100*** *Practical:*
Theory: 0 End Term Exam: 50
Tutorial :15 P.A.: 50
Practical: 60
Credit: 3

RATIONALE

To make the students aware of the uniqueness of the various draping styles, costumes, colour schemes and accessories of India; and to make these a source of inspiration in their designing skills. Draping is an integral part of fashion technology and it shows the fall of the stitched garments. The students learn in detail the principles of draping fabric on the dress form for pattern making with proper fullness in the garment by shifting of darts, etc and learn. The subject develops an understanding to design in three dimensions with the understanding of design/ pattern.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**INTRODUCTION TO DRAPING** - Terminology - Dummy preparation - Muslin preparation	**2T**
2.0	**BASIC BODICE BLOCK** - Front - Back	**2T**
3.0	**DART MANIPULATION** - Single dart series - Double dart series	**2T**
4.0	**BASIC SKIRT BLOCK** - Single dart - Double dart - Dart Equivalents	**3T**
5.0	**SKIRT VARIATIONS** - Flared - Gathered - Skirts with yokes	**4T**
6.0	**NECKLINE & ARMHOLE VARIATIONS**	**2T**

SUGGESTED IMPLEMENTATION STRATEGIES

- Hands on practical experience,
- Repetitive exercise for improvement,
- Visits to boutiques for observation of their techniques.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Draping for Apparel Design	H. Joseph Armstrong, Prentice Hall , 4th edn., 2005
2. Dress Design, Draping and Flat pattern	Hillhouse and Mansfield
3. Dress Pattern Designing	Natalie Bray
4. Drapery for Fashion Design	Filde Jeffe, Norie Relas
5. Draping	Reston Publishing Co. Virginia

PRACTICAL:

Suggested list of assignment / activities:

1. Submission of Basic Bodice Block Front & Back (for men, women and children)
2. Submission of Manipulated patterns
3. Submission of Skirts

PRODUCT DEVELOPMENT & FASHION FORECUSTING

L	T	P	***Curri. Ref. No.:GFT409***
2	1	2	

Total Contact hrs.:
Theory: 30
Tutorial :15
Practical: 30
Credit: 4

Total marks: 100

Theory:
End Term Exam: 50
P.A.: 0
Practical:
End Term Exam: 25
P.A.: 25

RATIONALE

This course is introduced in the Garment and Fashion Technology curriculum with the objectives of imparting knowledge and understanding of interpretation of Fashion Forecast and developing an understanding of application of Fashion Forecast in further development of the product.
This course will enable the students on various methods of fashion forecasting used in the fashion industry.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**FASHION FORECASTING – NEED & INTERPRETATION** - Fashion forecasting for various fashion levels - Basics of Couture	**4L**
2.0	**MARKET RESEARCH AND VARIOUS FASHION MARKET SEGMENTS** - Application of fashion forecasting for various segments - Students will work on target market - Visual board.	**4L**
3.0	**FASHION RESEARCH PROCESS** - Methods and Ingredients of a Fashion Forecast	**4L**
4.0	**FORECASTING PREDICTIVE PRESENTATION** - Students will work on 2 themes for their target market.	**4L**

5.0	**FORECASTING PREDICTIVES 4L** Students will research on fashion predictive and develop a visual concept/theme board for their chosen theme.
6.0	**FASHION FORECASTING COLOUR 4L** - How to develop and focus color palette for your business. - Students will identify colors for coming season for their target market.
7.0	**FASHION FORECASTING : FABRIC & TRIMS 6L** - Fabric, print, pattern forecasting - Color and fabric forecasting agencies - Students will study fashion predictive, magazines and identify the trims forecasted for future season -
8.0	**FORECASTING SILHOUETTES 4L** Students will study fashion predictive, magazines and identify the silhouettes forecasted for future season
9.0	**TREND IDENTIFICATION AND INDIAN FASHION SHOWS 6L** - Fashion shows, trade shows, world's fashion centers - Influence of fashion shows, trade shows on Indian Fashion
10.0	**FORECASTING PRESENTATION TECHNIQUES 6L** Students will compile the trends collected for their target segment. Influence of fashion shows, trade shows on Indian Fashion.

SUGGESTED IMPLEMENTATION STRATEGIES

- Class room lecture and discussion
- Computer assisted Presentations
- Fashion predictives, fashion magazines.
- Interactive sessions

SUGGESTED LEARNING RESOURCES

(a) Reference Books:

Title	Author; Publication; Edition; Year
1. Fashion Forecasting	Rita Perna, Fairchild Publications
2. Beyond Design The Synergy of apparel product development	Sandra J. Keiser and Myrna B. Garner, Fairchild publication
3. Concept to consumer	G.S. Frings, Fairchild Publications
4. Inside Fashion Business	Jeannette Jarnow and Kitty G. Dickerson

(b) Reference Magazines, Journals and other sources:

- Vogue
- WWD
- Inside fashion
- DNR
- Fashion weekly
- WGSN
- Promostyl

PRACTICAL:
Suggested list of assignments/ activities :

1. **Target market visual board**: - Students will research on target segment for a brand and develop a visual A-4 size collage/ board representing their target market. Summary about the board should describe the brand and target customer profile. (**10 marks)**

2. **Theme/ concept board**: Students will develop a theme board for their target market. The theme should be inspired from fashion predictives/ fashion magazines. Theme should have written summary describing underlining trends in terms of fabrics, colors, trims, silhouettes, details. (1**0 marks)**

3. **Color board**: Students will develop color board for their target market. The colors chosen should be as per the theme developed in assignment no.2 Inspiration from fashion predictives/ fashion magazines and current trends should be taken. (**20 marks)**

PATTERN FOR FINAL TERM EXAMINATION PAPER

- **Project- Fabric and Trim board:** Students will develop fabric and trim board for their target market. The fabrics and trims chosen should be as per the theme developed in assignment no.2 Inspiration from fashion predictives/ fashion magazines and current trends should be taken. Target market visual board, theme board, color board, fabric and trim boards should be finally complied together for midterm review.

- **Project- Silhouette board:** Students will finally forecast the silhouettes as per the research undertaken during the semester. Silhouette board should have 8-10 silhouettes, or details forecasted for your category/ brand. Inspiration from fashion predictives/ fashion magazines and current trends should be taken. Final end term review will include compilation of all projects. Final summary should describe the forecasted trends in terms of fabrics, colors,

FABRIC FORMATION TECHNIQUE

L	T	P	***Curri. Ref. No.:GFT410***
2	1	4	

Total Contact hrs.:	***Total marks: 150***	*Theory:*
Theory: 30		End Term Exam: 50
Tutorial :15		***P.A.: 0***
Practical: 60		*Practical:*
Credit: 5		End Term Exam: 50
		P.A.: 50

RATIONALE

This course will enable the learners to identify various properties of fibers affecting the weaving process. The course also includes different types of weaves used in garment industry and specially the knowledge about knitted fabric and garments for effective knitwear design.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**INTRODUCTION** - Structure and major segments of the textiles industry - Textile fibers-Definitions, Sources of fiber, Fiber properties, Fiber classification	**6L**
2.0	**YARN AND SEWING THREADS** - Yarn numbering system, Sewing threads, Technical specifications to buy fabrics	**6L**
3.0	**WOVEN FABRIC** - Manufacturing of woven fabrics and other fabric formation techniques - Construction of elementary weaves, Various weaves and fabrics	**6L**
4.0	**KNITTING** - Principal of knitting, knitted fabric structure, Various types of knitted fabrics	**6L**
5.0	**FABRIC DEFECTS** Woven defects and Knitted defects - type ,source and remedies	**6L**

SUGGESTED IMPLEMENTATION STRATEGIES

- Class room lecture and discussion
- Computer assisted presentations
- Demonstration

- Industry visit

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Fabric science	Joseph.J.Pizzuto 7th edition
2. Weaving calculation	Sengupta
3. Textiles from fiber to fabric	B.P.Corbman
4. Understanding of fabrics	P.Tortora and B.Collier
5. Knitting technology	David Spencer
6. Introduction to knitting	Ajgaonkar

PRACTICAL:

Suggested list of assignments / activities:

1. Research on Fibres, Yarns & Fabrics
2. Making of a swatch file different weaves and knits

APPLIED TECHNOLOGY COURSES

ENTREPRENEURSHIP DEVELOPMENT

L	T	P	***Curri. Ref. No.: GFT501***
3	0	0	

Total Contact hrs.: ***Total marks: 100*** *Theory:*
Theory: 45 End Term Exam: 75
Tutorial :0 P.A.: 25
Practical: 0
Credit: 3

RATIONALE

The course intends to provide the fundamental aspects of entrepreneurship as a means for self employment and culminating in economic development of the country. It deals with basic issues like entrepreneurial characteristics and quality, governmental policy support and overall scenario along with opportunities and the facilities available for entrepreneurship development.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**INTRODUCTION**	**10**
1.1	Definition and functions of Entrepreneur, entrepreneurship quality, entrepreneurial spirit, need for entrepreneurship.	
1.2	Individual and social aspects of business – achievement motivation theory	
1.3	Social responsibilities of Entrepreneurs	
2.0	**FORMS OF BUSINESS ORGANISATION**	**4**
2.1	Types of company	
2.2	Merits and demerits of different types	
2.2	Registration of small scale industries	
2.4	Conglomeration.	
3.0	**SMALL SCALE AND ANCILLARY INDUSTRIES**	**8**
3.1	Definition – scope with special reference to self employment.	
3.2	Procedure to start small scale and Ancillary industries	
3.3	Pattern on which the Scheme/Project may be prepared	
3.4	Sources of finance - Bank, govt., and other financial institutions.	
3.5	Selection of site for factory	
3.6	Factors of selection	
3.7	N.O.C. from different authorities, e.g., Pollution Control Board, Factories Directorate etc.	
3.8	Trade License.	

4.0 SYSTEM OF DISTRIBUTION **1**

4.1 Wholesale Trade
4.2 Retail trade

5.0 SALES ORGANISATION **3**

5.1 Market survey, marketing trends, knowledge of competitors, product selection & its basis .
5.2 Sales promotion
5.3 Advertisement
5.4 Public relations and selling skills

6.0 PRICING THE PRODUCT **1**

6.1 Basic guidelines

7.0 INTRODUCTION TO IMPORT AND EXPORT **6**

7.1 Procedures for export
7.2 Procedures for import
7.3 Technical collaboration – international trade
7.4 Business insurance
7.5 Rail and road transport
7.6 Forwarding formalities, FOR, FOB, CIF, etc.

8.0 BUSINESS ENQUIRIES **4**

8.1 Enquiries: From SISI, DIC, SFC Dept. of Industrial Development Banks.
8.2 Offers and Quotations
8.3 Orders

9.0 PROJECT REPORT **6**

9.1 Project Report on feasibility studies for small scale industries, proposal for finances from bank and other financial institutions for establishing new industries and its extension, obtaining License enlistment as suppliers, different vetting organizations for Techno Economic feasibility report.
Breakeven analysis, Breakeven point.

10.0 ENVIRONMENT LEGISLATION **2**

10.1 Air Pollution Act
10.2 Water Pollution Act
10.3 Smoke Nuisance Control Act
10.4 ISO: 14000, OSHA

SUGGESTED LEARNING RESOURCES:

Reference Books:

1. Entrepreneurship Development
   Prepared by CTSC Manila Publishers by Tata Mc Graw Hill Publishing Co. Ltd.
2. Small Enterprise Management Published by ISTE, Mysore
3. Motivation Published by ISTE, Mysore
4. S.S.M. in Environmental Engineering Published by ISTE, Mysore
5. Entrepreneurship New Venture Creations, Holt, Prentice Hall, India.
6. Essence of TQM by John Bank
7. ***Rathore, B.S. and J.S. Saini(ed), A Handbook of Entrepreneurship – Panchkula : Aapga, 1997***
8. ***Jose Pauletal, Entrepreneurship Development, Mumbai : Himalaya Publishing House, 1996***
9. ***Khanka, S.S., Entrepreneurship Development, New Delhi : S. Chand and Co., 2001***
10. ***Nagarazan, R.S. and A.A. Arivalagar, TQM New Delhi : New Age International Publishers, 2005***
11. ***Bhatia, R.C., Marketing Communication and Advertising, New Delhi : Galgotia Publishing Co., 2003***
12. ***Sinha, J.C., and V.N. Mugali : A Textbook of Commerce, New Delhi : R. Chand and Co., 1994***

APPAREL QUALITY ASSURANCE

L	T	P	***Curri. Ref. No.:GFT502***
2	1	4	

Total Contact hrs.:	***Total marks: 150***	*Theory:*
Theory: 30		End Term Exam: 50
Tutorial :15		***P.A.: 0***
Practical: 60		*Practical:*
Credit: 5		End Term Exam: 50
		P.A.: 50

RATIONALE

For every industry or business, to get increased sales and better name amongst consumers and fellow companies it is important to maintain a level of quality. Especially for the businesses engaged in export business has to sustain a high level of quality to ensure better business globally. Generally quality control standards for export are set strictly, as this business is also holds the prestige of the country, whose company is doing the export. Export houses earn foreign exchange for the country, so it becomes mandatory to have good quality control of their products. In the garment industry quality control is practiced right from the initial stage of souring raw materials to the stage of final finished garment. For textile and apparel industry product quality is calculated in terms of quality and standard of fibres, yarns, fabric construction, colour fastness, surface designs and the final finished garment products. However quality expectations for export are related to the type of customer segments and the retail outlets.
There are a number of factors on which quality fitness of garment industry is based such as – performance, reliability, durability, visual and perceived quality of the garment. Quality needs to be defined in terms of a particular framework of cost.
This subject details with apparel quality control, garment specialization and inspection.

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	**Lecture Hrs.**

1.0: PRINCIPLES OF QUALITY CONTROL 6L

- Deliberations on the principles and definitions of quality, quality as function, quality control, quality cost, maintenance of quality standard and quality levels: quality parameters and specifications.
- Setting quality standards.
- Quality maintenance in an apparel production unit.
- Inspection and its importance.
- Inspection methods for different types of fabrics: fabric defects and its significance (with practical demonstrations)

2.0 TESTING AND INSPECTION METHODS 6L

- Testing and inspection methods for the evaluation of the quality standards and performance of Trims & accessories, like sewing threads, buttons, zippers, interlinings, etc.
- International quality standards & specifications for all of these items (with practical demonstrations). Test of conformance to the set standards.

3.0 STANDARD TEST METHODS 6L

- Different standard test methods used internationally for the evaluation of the performance & quality standards of dyed yarns and fabrics, printed fabrics, finished fabrics, specialized fabrics used for manufacturing apparel products.
- Detail deliberations on the processes and techniques of evaluating, like color fastness, strength, bending, surface properties etc (with practical demonstrations).

4.0 GARMENT SPECIFICATION 3L

- Garment specifications-size chart, seam and stitch specifications, cutting and sewing techniques followed and the machineries used, finishing applied, etc. setting the specifications and different standard test methods used internationally for the evaluation of the quality standard of garments (with practical demonstrations)

5.0 QUALITY CONTROL TECHNIQUES 6L

- Quality control techniques, AQL, AOQL & their applications in the apparel sector.
- Control limits and setting standards in apparel manufacturing units. Quality cost and conformance their significance in product and organizational brand image.
- Quality assurance.
- Significance of training and man power development in quality control.
- Quality control vis-à-vis quality case study on these areas with apparel industry data for different types of garments.
- On the line and Final Quality Checking.

6.0 INTERNATIONAL STANDARDS 3L

- International standards and specifications for apparel sector.
- Different quality standard organizations and inspection bodies, their functions.
- Concepts of ISO and its significance. Latest developments on quality standards and specifications.

SUGGESTED IMPLEMENTATION STRATEGIES

- Important concepts will be explained in the classroom

- Students will be asked to refer to various standards of textiles and garment
- Students will be given practical demonstration of processes and techniques of evaluating, like color fastness, strength, bending, surface properties etc
- Students will visit quality control section of garment manufacturing unit and garment export unit

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Management Quality in Apparel Industry	Pradip V. Metha & S.K. Bhardwaj
2. Quality is Free	Philip Crosby
3. Juran's Quality Assurance for Textiles and Apparel	Sara J. Kadolph

PRACTICAL:

Suggested list of assignments / activities:

- Prepare a file of different types of Fabric defects
- Identify common quality Problems in Garments
- Visit the Quality Control section of a garment manufacturing unit and prepare a report
- Study different Quality standards of textiles and garment
- Visit the quality control section of a garment export unit and prepare a report
- Study different types of defects such as sewing defects, colour defects, sizing defects.

HISTORICAL COSTUMES OF INDIA

L	T	P	***Curri. Ref. No.:GFT503***
3	1	0	

Total Contact hrs.: ***Total marks: 100*** *Theory:*
Theory: 45 End Term Exam: 75
Tutorial :15 ***P.A.: 25***
Practical: 0
Credit: 4

RATIONALE

India is a vast country with lots of diversity in costumes and their use. Every states and tribes have different costumes. All different dance forms use different costumes. There are various types of bridal costumes also. The students of fashion technology should be able to appreciate our ancient civilization, the fashion existing in the different periods, their contribution in shaping the present and promoting the future trends in the field of fashion. This will help the student in doing more creative work and adapting the historic pattern on modern dresses.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**ORIGIN OF CLOTHING** Theories – Protection, modesty, Adornment	**4L**
2.0	**STUDY OF INDIAN COSTUMES FROM EARLIER TIMES** Indus Valley Period,- Vedic Period, Mauryan and Sunga Period,- Satavahana Period, Kushan Period,- Gupta Period, Mughal Period, British Period	**8L**
3.0	**COSTUME IN ANCIENT CIVILIZATION** Egyptian, Crete, Greek, Roman, Byzantine.	**6L**
4.0	**TRADITIONAL COSTUMES OF INDIA** Types of costumes for male and female, significance of culture and rituals for different Indian states. Study of different types of Indian saris.	**8L**
5.0	**BRIDAL COSTUMES** Study history, designs and development of traditional Indian bridal costumes	**6L**

6.0	**DANCE COSTUMES** Study history, designs and development of traditional Indian dance costumes	**6L**
7.0	**TRIBAL COSTUMES OF INDIA** Indian tribal costumes with special focus on costumes of North Eastern States	**7L**

SUGGESTED IMPLEMENTATION STRATEGIES

This course requires a lot of innovation and creative skills to be developed in the students. Hence, there should be creativity sessions. Exposure to different types of fashion and women's magazine is essential. Visits to various state emporiums, exhibitions of traditional handloom and costumes should be organized. There are certain dedicated websites on traditional costumes which can be utilized.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
1. Costumes & Textiles of Royal India	Kumar Ritu, Christies Book Ltd, London, 1999.
2. Textiles in Ancient India	Singh Kiran, Vishwa Vidalaya, 1994
3. Costumes of India and Pakistan	Oar S.N., OB Tataporevala Sons and Co. Ltd., Bombay. 1982
4. Indian Costumes	Ghurey, G.S., The Popular Book Depot.
5. Masterpieces of Indian Textiles	Mehta, Rustam J, Taraporevala Sons & Co. Pvt. Ltd., Bombay. 1982
6. Fashion Accessories – Men	Peacock John, Thames and Hudson, London, 1996
7. The Complete 20th Century Source Book	Peacock John, Thames and Hudson, London, 2000.
8. History of Fashion	Manmeet Sodhia, Kalyani Publishers, 2008
9. Ancient Indian Costumes	Roshen Alkazi, Mapin Publishing Pvt. Ltd., 2006
10. History of World Costumes	Carolyn Bradley, Peter Owen, 1998
11.The brides sewing book	Anne Ladbury

SUGGESTED LIST OF ASSIGNMENT

1. Sketch costumes for men, women and children and accessories for the following :
   a. Indus valley civilization.
   b. Vedic age
   c. Mauryan
   d. Mughal
2. Sketch costumes for men, women and children and accessories for East, West, North and South regions of India.
3. Prepare sketch book / file of the Indian traditional costumes.

CREATIVE DYEING AND PRINTING

L	T	P	***Curri. Ref. No.:GFT504***
0	1	4	

Total Contact hrs.: ***Total marks: 100*** *Practical:*

Theory: 0 End Term Exam: 50

Tutorial :15 P.A.: 50

Practical: 60

Credit: 3

RATIONALE

Dyeing and laundry units also have a very big scope of entrepreneurial ventures and it is also an important part of the garment industry, therefore, looking to the need of qualified launderers this course has been included as an elective for the interested students.

DETAIL COURSE CONTENT

THEORY:

UNIT	**TOPIC / SUB-TOPIC**	**Lecture Hrs.**
1.0	**INTRODUCTION TO DYEING**	**3T**
	- Classification of dyes • Natural – Vegetable, Animal & Mineral Dyes • Synthetic Dyes – Acid, Basic, Mordant, Disperse, Developed, Vat, Sulphur, Pigment, Direct - Determining colour fastness - Identification of defects	
2.0	**PREPARATORY PROCESSES DYEING**	**4T**
	- Different Methods of Dyeing - Yarn Dyeing - Piece Dyeing	
3.0	**TIE AND DYE, BATIK**	**4T**
	- History - Different Methods	
4.0	**INTRODUCTION TO PRINTING**	**4T**
	- Difference in Dyeing and Printing - Different types of Printing – block printing, discharge printing, stencil	

	printing, spray printing, khadi printing, screen printing and preparation of screen

SUGGESTED IMPLEMENTATION STRATEGIES

Visits to different types of dyeing and printing units, boutiques are to be organized Demonstration by professional can also be analyzed in the institute.

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
9. Fiber to Fabric	Corbman
10. J.J. Pizzuto's Fabric Science	Arthur Price
11. Technology of Textile Printing	R.S. Prayag
12. Textile Science	J.T. Marsh
13. Chemistry of dyes and principles of dyeing	V.A. Shenai
14. Understanding Textiles	Phyllis Toratora
15. Batik	Eloise Piper
16. Tie Dyeing And Batik	Fay Anderson

PRACTICAL:

Suggested list of experiments:

- Simple dyeing methods using different types of dyes
- Prepare samples of dyed fabrics using creative dyeing methods
- Prepare samples using different printing methods
- Testing dyed and printed fabric for colour fastness
- Assignment I-Preparation of journal from Unit 2,3 and 4
- Assignment II-Preparation of article from Unit 3 and 4

PORTFOLIO DEVELOPMENT

L	T	P	***Curri. Ref. No.:GFT505***
0	0	12	

Total Contact hrs.:	***Total marks: 200***	*Practical:*
Theory: 0		End Term Exam: 100
Tutorial: 0		P.A.: 100
Practical: 180		
Credit: 5		

RATIONALE

A student of fashion design needs to incorporate what she has learnt in the last five semesters in their work and be able to present the same. This can be done through the course of Art Portfolio.

DETAIL COURSE CONTENT

Every student will be required to undertake project work individually on any topic or theme under the guidance of appointed guide. The project work will comprise of the following activities.

- Selection of topic/theme, design idea and concept
- Feasibility of conducting the project
- Preparation of project Report.
- Preparation of Project port-folio, design details
- Preparation of articles, dresses, accessories for the practical full-fillment of project work
- Presentation of Project work

FASHION MERCHANDISING

L	T	P	***Curri. Ref. No.:GFT506***
3	1	4	

Total Contact hrs.:	***Total marks: 200***	*Theory:*
Theory: 45		End Term Exam: 75
Tutorial :15		***P.A.: 25***
Practical: 60		*Practical:*
Credit: 6		End Term Exam: 50
		P.A.: 50

RATIONALE

Merchandising is one of the important aspects of fashion. Some students may find employment in apparel merchandising and retailing agencies. So the aim of the subject is to enable students to appreciate the unique aspects and concepts of merchandising, retailing etc. It focuses attention on apparel business giving a thorough knowledge of merchandising. This subject will wider the students knowledge of fashion concept and how to market and promote fashion values through various media.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**INTRODUCTION** - Nature & Scope, importance of marketing, Modern concept of marketing & marketing mix, Marketing Environment. - Marketing Analysis - Sales Forecast, Market Segmentation. - Study of fashion principles, theories and fashion cycle and terminology - Introduction to fashion marketing and merchandizing principles – retail, whole sale, boutique, designer – wear, couture, prêt-o-porter (ready to wear), haute couture (hi-fashion) - Study of domestic and international market – past, present and future scenario – evolution of fashion - Economical social, environmental and political influences of fashion	**10L**
2.0	**CONSUMER BEHAVIOUR ANALYSIS** - Factors affecting consumer behaviour. - Process of consumer buying, decision making	**6L**
3.0	**PRODUCT PLANNING & DEVELOPMENT** - Concept of Product line.	**8L**

	- Product mix & Product classification. - Development of new products. - Brand name & trade marks. - Packaging. - Product line cycle.	
4.0	**PRICING- FACTORS, PRICE DETERMINATION & METHODS OF PROMOTION** a. Pricing- factors affecting Price determination. b. Channels of distribution – their role & functions, selection, motivation & control. c. Methods of Promotion. - Advertising – Role & functions, Selection of media designing of message, Regulation of advertising in India. - Personal selling- Selling as a career, characteristics of personal selling. - Management of sales force selection, recruitment training motivation, compensation & evaluation & sales performance.	**12L**
5.0	**FASHION BUYING** - Interpreting Customer Demand - Developing Fashion Image - Analyzing & Selection Resources - Buying in Domestic & Foreign Market	**8L**

SUGGESTED IMPLEMENTATION STRATEGIES

This is a theoretical course hence there should be interactive sessions. Guest lectures by professionals in the fashion industry should be organized. In-depth study of market reports should be done by the students and presentation in the form of seminars will be organized for the students.

SUGGESTED LEARNING RESOURCES

Title	Author; Publication; Edition; Year
1. Fashion Design and Product Development	Harold Carr and John Pomeroy, Black well Science Inc, Cambridge (1992)
2. Fashion Marketing	Mike Easey, Oxford University press, Wynford Drve, Don Mills, Ontario (1995)
3. Introduction to Fashion	Patrick John, B T Batsford Ltd, Ireland, Fullham road, London (1992).
4. Fashion From Concepts to Consumer	Stephens Frings, PrenticeHall,7th Edition 2002
5. Marketing Management	Philip Kotler, Prentice Hall, 7th Edition 1996.

PRACTICAL:

Suggested list of assignments/activities :

Study of various aspects as listed below and their documentation

- Current Indian export and India's position in the world apparel / textile market
- Organization structure of export house, buying house and domestic companies
- A basic profile of industry in far east, Europe and USA
- Cost reduction and value analysis

SEMINAR

L	T	P	***Curri. Ref. No.:GFT507***
0	0	6	

Total Contact hrs.:	***Total marks: 100***	*Practical:*
Theory: 0		End Term Exam: 50
Tutorial :0		P.A.: 50
Practical: 90		
Credit: 3		

RATIONALE

Students need to develop skill of presenting the fact and data related to technical matter through vocal presentation and hence the arrangement of seminar is necessary. This will enable the student to develop the skill of effective presentation of a technical topic in a gathering and also be able to interact with the audience during questionnaire session.

SUGGESTED IMPLEMENTATION STRATEGIES

- Individual has to speak for minimum fifteen minutes during examination and explain the related questions at time of oral examination to a panel of three members out of which one will be external.
- Soft copy of Presentation should be submitted for evaluation in due time.
- Concerned faculty member should do continuous assessment.

PROJECT

L	T	P	***Curri. Ref. No.:GFT508***
0	0	12	

Total Contact hrs.:	***Total marks: 200***	*Practical:*
Theory: 0		End Term Exam: 150
Tutorial: 0		P.A.: 50
Practical: 180		
Credit: 6		

RATIONALE

In order to assess the integration of the knowledge and skills which were developed during the course of the study, project work is an essential component. Keeping this in mind this course has been developed to enable the students to select a topic of their interest and undertake project related to the field.

DETAIL COURSE CONTENT

Every student is required to undertake project work individually on any topic related to the field of Garment and Fashion Technology under the guidance of the appointed guide. The project work will comprise of the following activities.

- Survey / Selection of Topic
- Selection of instrument for data collection
- Feasibility of conducting the project work
- Finalization of Topic, Design idea and Concept
- Preparation of the Project Report
- Preparation of articles for the practical fulfillment of project work
- Presentation of Project Work

Each student will be required to carryout experimental/survey /designing work on the selected topic under the supervision of faculty member and submit the work in the form of a technical report in two copies.

INDUSTRIAL TRAINING

L	T	P	***Curri. Ref. No.:GFT509***
-	-	-	

Credit: 6 ***Total marks: 200*** *Practical:*
End Term Exam: 100
P.A.: 100

RATIONALE

The purpose of industrial training is to expose students to the latest practices, equipments and techniques used in the field and to provide opportunities for hands on experiences in their field. Such opportunities expose them to the intricacies of the world of work. The basic purpose of this course is to provide an opportunity to student during their course of study for such a experience. This would not only improve their technical competency but at also develop non technical skills such as planning, scheduling, problem solving, team work, decision making, time management etc. The nature of training may vary with the discipline and the area selected. Some of the widely used forms of industrial training in the country are: designing a component/part/machine for a specific purpose, Engineering Analysis, Innovative Product Development, Feasibility study and generating solution/s for real life problem.

DETAIL COURSE CONTENT

On the basis of the electives and the courses/ subjects completed student can undergo training of four-week duration in any of the following areas in consultation with faculty. For example in Garment Production and Fashion Technology the areas could be

- Boutique Management
- Garment Manufacturing Units
- Khadi and Village Industries units
- Event Management
- Handloom units

The students may also be given special projects within the institute in case it is not feasible to place them in various industries/agencies. The special projects could be

- Organize fashion shows and exhibitions
- Preparing a feasibility report to start a boutique
- Prepare a report to enhance fashion business in the State
- Prepare a comprehensive report after making a detailed study of quality control methods in Garment industry
- Design exclusive dresses as per occasion /season/location etc.

Suggested implementation strategies

- Orientation programme
- Training in the industry
- Report writing and
- Evaluation

Note

Orientation programme: During the orientation programme complete guidelines will be provided to the students regarding planning, implementation and evaluation of industrial training.

Training in industry: During the training student will have to maintain a daily dairy to record his observations and experiences in various department/section and on the basis of daily dairy student will prepare and submit the Industrial Training Report. Competent faculty/ staff member shall follow-up the students progress regularly. The student should be encouraged to seek & collect relevant forms; brochures; & other print material from the various organization related to training/project.

Report writing: Daily dairy will form the basis for report writing. The formats for the report preparation will vary depending upon the type of training / project and will be generated by the teacher guide.

Evaluation: For the industrial training as per teaching and assessment scheme equal weightage is given for end of term and progressive assessment.

For the end of term evaluation each student has to prepare and present a seminar paper related to experience gained during the industrial training. Each student will be evaluated on the basis of training report, seminar presentation and viva voce.

For progressive assessment proper recording of events in daily dairy and generation of weekly reports will form the basis.

ELECTIVE COURSES

TRADITIONAL HAND EMBROIDERY
& MACHINE EMBROIDERY

L	T	P	***Curri. Ref. No.:GFT601***
3	1	4	

Total Contact hrs.:	***Total marks: 200***	*Theory:*
Theory: 45		End Term Exam: 75
Tutorial :15		P.A.: 25
Practical: 60		*Practical:*
Credit: 6		End Term Exam: 50
		P.A.: 50

RATIONALE

Embroidery is an old art of decorating the fabrics and garments. The exquisite traditional embroidery like phulkari of Punjab, Chikan-work of Lucknow etc. are very popular. The main aim of introducing embroidery is to provide basic skills to the students so that they can have the ideas to use it with woven and printed design/ fabrics as and when designed.

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.

1.0 BASIC EMBROIDERY EQUIPMENT **6L**

Equipment for hand embroidery such as needle, frame scissors, thread-holders, thimbles, carbon paper, tracing paper, yarn, and skeins (cotton, rayon and silk)

2.0 TRANSFERING THE DESIGN ON FABRIC **10L**

- By carbon paper
- By pounds method
- Rubbing method
- Tracing table method
- Pressing method

3.0 TRADITIONAL EMBROIDERIES 10L

History, origin style, materials and stitches, used for following embroideries, phulkari, Kutch & Kathiawar Embroideries, Kasida of Kashmir, Chilkankari of Lucknow, Kantha of Bengal, Gold & Silver Embroidery, Bead Work, Cut work and open work, kasuti of Karnataka, Manipur Emboridery.

4.0 TRADITIONAL EMBROIDERIES OF NORTH-EASTERN STATES 8L

History, Origin, Style, material and stitches, used for North – Eastern State embroideries.

5.0 MACHINE EMBROIDERY 10L

- Study of different types of machines used for machines embroidery
- Attachments used for machine embroidery
- Computerized machine embroidery
- Types of machine embroideries
- Machine Quilting

SUGGESTED IMPLEMENTATION STRATEGIES

This is highly practical oriented course, which demand lots of skill and dexterity. The more practice-work is given there will be an increase in neatness and accuracy of work. Sample of various embroidery should be made available to the students to give them an idea about the finish and look.

SUGGESTED LEARNING RESOURCES

Reference Books :

Sl.No.	Title	Author/Publisher
1	Indian Embroideries	Savitri Pandit
2	Indian Embroideries	Kamala Devi Chattopadhyaya
3	Encyclopedia of Needle work	Barbara Snooke B.T/ Bate Ford Ltd. Heartside Press
4	Learning to Embroidery	Pevel Publications INC New York
5	Encyclopedia of Embroidery stitches	Therasa de Allmonth
6	Encyclopedia of Needle work	Fashion Book Company of India
7	Directory of Embroidery stitches	Thomas
8	Teach yourself Embroidery	Mary Thomas

PRACTICAL:

Suggested list of assignments/activities:

- Prepare one sample each of methods of transfer in design on fabric
- Samples of traditional embroidery of India listed in theory paper
- Prepare at least four articles using traditional embroideries and basic stitches
- Prepare samples of various machine stitches
- Prepare samples using multiple stitches and colours
- Prepare samples on computerized embroidery machines
- Prepare samples of machine quiliting

GARMENT PRODUCTION TECHNOLOGY

L	T	P	***Curri. Ref. No.:GFT602***
3	1	4	

Total Contact hrs.:
Theory: 45
Tutorial :15
Practical: 60
Credit: 6

Total marks: 200

Theory:
End Term Exam: 75
P.A.: 25
Practical:
End Term Exam: 50
P.A.: 50

RATIONALE

This course is introduced as elective in order to orient the students with Different production systems. They will learn to use tools required for scientific decision making and Methods for optimizing utilization of resources for production. This course will make them aware of Production Technology in Garment Manufacture and Garment Manufacture process from sampling to shipping. After completion of the course students will develop an understanding of how production is carried on and how it may be managed in most efficient manner.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**OVERVIEW OF GMT** - Cutting Room Procedure - Spreading & Cutting - Marker Making - Cutting m/c and equipments – Working and features	**6L**
2.0	**SEAMS** - Stitch Classification - Seam analysis of Garment - Stitching m/c: classification –types & features	**4L**
3.0	**FINISHING M/C AND EQUIPMENT** - Features	**4L**
4.0	**PRODUCTION PLANNING AND CONTROL**	**4L**
5.0	**TIME AND METHOD STUDY**	**2L**
6.0	**INVENTORY MANAGEMENT** - The task of the materials control department	**10L**

	- Types of Materials - Inventory Costs - Selective Inventory Control Techniques	
7.0	**MRP CONCEPTS**	**2L**
8.0	**PROJECT MANAGEMENT** - Introduction to networks - CPM - PERT - Project cost time trade offs	**12L**

SUGGESTED IMPLEMENTATION STRATEGIES

- Lecture, Sewing Lab demonstrations (Faculty, Experts)
- Methodology based individual assignments
- Exploration and presentation
- Field visit/ industry visit with respect to each of the materials
- Review and feedback by faculty

SUGGESTED LEARNING RESOURCES
(a) **Reference Books:**

Title	Author; Publication; Edition; Year
6. Production and Operations Management	i) S. N. Chary ii) Elwood Buffa & Rakesh Sarin iii) Everette Adam Jr & Ronald Ebert
7. Operation Research	V.K. Kapoor
8. Introduction to clothing Manufacturing	Gerry Cooklin
9. The Technology of Clothing Manufacture	Carr and Latham
10. Apparel Manufacture Sewing Pattern Analysis	Gerry Cooklin
11. Fashion Buying & Merchandising	Tim Jackson & David Shaw

(b) Reference Magazines, Journals and other sources:

- Apparel India
- Clothesline
- Apparel Online
- Stitch World
- The Stitch Times
- Global apparel

PRACTICAL:

Suggested list of assignments / activities:

- Understanding of theoretical inputs and practicality of application
- Inventory Management : Understanding of theoretical inputs and practicality of application

ADVANCED SURFACE ORNAMENTATION TECHNIQUES

L	T	P	***Curri. Ref. No.:GFT603***
3	1	4	

Total Contact hrs.:	***Total marks: 200***	*Theory:*
Theory: 45		End Term Exam: 75
Tutorial :15		P.A.: 25
Practical: 60		*Practical:*
Credit: 6		End Term Exam: 50
		P.A.: 50

RATIONALE

This course is introduced as an Elective for the students of Hotel Management and Catering Technology with the following objectives:

- to understand various hand embroidery techniques of different cultures as a surface embellishment technique,
- To appreciate traditional embroidered textiles of India vis-à-vis their material, form, texture, colour and relate it to art, architecture, patronage trade and other influences.
- To develop an understanding of techniques and processes used in textiles of India and modify the traditional embroidery for contemporary adaptations and applications.
- To assimilate and adapt traditional embroidered textile knowledge for design ideation and inspiration and adapt the techniques into fashion products. (Course blends theory with hands on practice)

DETAIL COURSE CONTENT

THEORY:

UNIT	**TOPIC / SUB-TOPIC**	**Lecture Hrs.**
1.0	Introduction to Traditional Indian Textiles: embroidered and embellished. Kantha, Sujani, Phulkari, Chamba Rumals, Kashmir Shawls, Zalakdozi. Chickankari, Zardozi, Lambadi, Kasuti,	10L
2.0	Creative explorations and contemporisation of Chamba, Kashida and Kasuti. Make samples of size 6”x 6”. Written and scrap book of all the traditional embroideries, based on designer’s collections	12L
3.0	Gujarat Rajasthan, Orissa (Practical – mirror, beads, appliqué, patch & quilting)	12L
4.0	Product development /swatch development for a fashion collection, create samples of size 6”x 6” (5-7 swatches)	10L

SUGGESTED IMPLEMENTATION STRATEGIES

- Visual references in embroidery and actual samples.
- Market Survey.
- Lecture/demonstration.
- Exploration of surface development techniques with prime objective of innovation.
- Visits to textiles and garment exhibition/fairs /expo.

- Research and Development
- Workshops
- Task based assignment
- Presentations

SUGGESTED LEARNING RESOURCES

(a) References Books:

Title	Author; Publication; Edition; Year
9. Silk Shading	Clare Hanlam-Search Press Needle craft
10. A Perfect Word in Ribbon Embroidery Stump work	Di Van Niekerk Search Press
11. Collins Complete Guide to Photography	Michael Freeman, Harper Collins Publishers
12. The Encyclopedia of Stitches	Karen Hemingway-New Holland
13. Indi- Folk and Tribal Design of India	M.S.Lehri, Superbook house
14. Drawn fabric embroidery	Elna Wark B.T.Batsford Ltd.
15. The Art of Fabric Collage Rosemary	Eichorn, The Taunto
16. The Techniques of Indian Embroidery	Anne Morrill B.T.

(b) Reference Magazines, Journals and other sources:

- National Geographic Surface Design Journal: surface design association
- www.surfacedesign.org

PRACTICAL:

Suggested list of assignments/activities:

Assignment 1	Create 4 samples of size 6”x 6” using the Design development for the following embroidery toward innovative fashion product with specification - Kantha - Phulkari - Chikankari - Zardozi
Assignment 2	Design development for 2 samples of Appliqué and/or Patchwork combined with quilting and bead or mirror work embroidery towards innovative fashion product with specification create samples of size 10”x 10” (MM 10)

Evaluation parameter	- Understanding of various techniques, material & processes - Creative Explorations - Assessment of skill - Appropriate usage of technique according to material used - Co-relation of material and technology to innovation in product development - Attendance - Neatness -
Learning outcome	- Perceiving areas for design interaction, appreciation and innovation. - Awareness and understanding of handcrafted processes & materials. - Perceiving areas for design interaction, appreciation and innovation. - The students should be able to create any embroidered surfaces for any kind of collection, based on trend forecasts.

:

ADVANCED FORMATION TECHNIQUES (WEAVING)

L	T	P	***Curri. Ref. No.:GFT604***
3	1	4	

Total Contact hrs.:	***Total marks: 200***	*Theory:*
Theory: 45		End Term Exam: 75
Tutorial :15		P.A.: 25
Practical: 60		*Practical:*
Credit: 6		End Term Exam: 50
		P.A.: 50

RATIONALE

This course in included in the curriculum as elective for imparting knowledge of fabric manufacture & fabric properties. This will enable the students to understand fabric structures & to analyze them.

DETAIL COURSE CONTENT

THEORY:

UNIT	TOPIC / SUB-TOPIC	Lecture Hrs.
1.0	**FABRIC FORMATION** Different method of fabric formation; classification of fabrics: end use, material, weaves, construction, thickness, surface characteristics, etc. Fabric construction methods, basic motions of weaving, looms types and parts-shuttle and shuttle less looms, and basic weaving concepts. Woven structure representation: plain weave, warp section, weft section & graphical representation. Translation of weave into fabric, design, draft, denting and lifting plans & interrelationships	**10L**
2.0	**ELEMENTARY WEAVES** Plain, twill and satin. Influence of these weaves on fabric characteristics.	**8L**
3.0	**PLAIN WEAVE DERIVATIVES** Warp weft rib, matt weaves and their influence on fabric characteristics. Examples of their applications in fabrics. Modification of twill weaves: Pointed, herringbone and diamond twills. Regular and irregular satin weaves and their applications in fabrics.	**10L**
4.0	**FANCY DECORATIVE WEAVES** Dobby, jacquard, pile, leno, surface figure -lappet and double weave	**6L**

5.0	**GLOSSARY OF FABRICS** **10L** Introduction of following standard fabrics: Blazer cloth, book muslin, brocade, buckram calico, casement cloth, chiffon. corduroy, crepe fabrics damask, denim, drills, duck, felted cloth, flannel, fustian, gabardine, honeycomb fabrics, huckaback cloth, jean khaki – leno, long cloth, mull muslin, organdie pile fabrics, pique, plush, pongee poplin quilts repp. Reversible cloth, rib cloth, rugs, serge, swivel fabrics, taffeta, terry towel, tweed, velveteen, welts, industrial fabrics (blowrapper), water resistant, fire resistant cloth, blankets, shawls, men's suiting's, women's suit fabrics, curtains, upholstery fabric.

SUGGESTED IMPLEMENTATION STRATEGIES

- Class room lecture and discussion
- Computer assisted Presentations
- Hands on practical experience,
- Repetitive exercise for improvement
- Visits to boutiques for observation of their techniques

SUGGESTED LEARNING RESOURCES

Reference Books:

Title	Author; Publication; Edition; Year
11. Woven cloth construction	Robinson and Mark, The Textile Institute, Manchester
12. Design of woven fabrics	Blinov and Belay, MIR Publishers, Moscow
13. Watson's textile design and colour	Grosicki, Z, Blackwell Science, U.K.
14. Watson's Advance Textile Design	Grosicki, Z, Blackwell Science, U.K.
15. Grammar of textile design	Nisbet, H, Taraporewala sons and Co, Mumbai
16. Textile Science	E.P.G. Goel and Vilensky, , CBS Publishers, New Delhi

PRACTICAL:

Suggested list of assignment / activities :

Original painted textile designs suitable for dobby weaving, four painted textile designs to be prepared by students. Each student should prepare separately their own design.

Preparation of point paper jacquard designs from original painted design. Applied design for damask, brocade, tapestry fabrics, double cloth leno and pile fabric should be prepared. At least four woven original jacquard designs to be produced by students.

FASHION PHOTOGRAPHY

L	T	P	***Curri. Ref. No.:GFT605***
3	1	4	

Total Contact hrs.:	***Total marks: 200***	*Theory:*
Theory: 45		End Term Exam: 75
Tutorial :15		P.A.: 25
Practical: 60		*Practical:*
Credit: 6		End Term Exam: 50
		P.A.: 50

RATIONALE

This course will enable the students:

- to examine and understand the various constituent parts and processes in a micro-environment and their interrelationships as manifested in socio-cultural, economic, political, religious and aesthetic realities therein through visual documentation.
- to understand the basic principles of photography as a skill and medium for effective documentation and communication.
- to appreciate, articulate, manipulate and apply the visual image existing in natural and human-made environments.
- to learn the essential techniques of visual/graphic documentation and presentation.
- to become aware of cultural nuances and personal interpretations in visual documentation

DETAIL COURSE CONTENT

THEORY:

UNIT TOPIC / SUB-TOPIC	**Lecture Hrs.**
UNIT – I	**10L**
i) Elements of Photography ii) Composition iii) Lighting iv) Camera Technique Subject Matter/Visual Image i) People ii) Products iii) Places	
UNIT – II	**10L**
Lecture demonstration on 'Composition, Shapes, Lines and curves, Diagonals for Dynamism Rule of Thirds	
UNIT – III	**12L**
- Lecture demonstration on - Depth of Field & Selective Focus - Point of View and Unusual Angles & Framing	

- Images & Cropping - People Photography - Photographing Architecture and Landscape
UNIT – IV **12L** - Lecture demonstration on - Black & White Photography - Color Harmony in Photography - Qualities of Light (Hard and Soft) Studio Still-life - Fashion Photography-Styling in the indoor

SUGGESTED IMPLEMENTATION STRATEGIES

- Illustrated Lectures and demonstrations in each class.
- Group discussions
- Case studies
- Review by faculty
- Task based assignments

SUGGESTED LEARNING RESOURCES

(a) References Books:

Title	Author; Publication; Edition; Year
17. Creative photography workbook	John Hedgecoe, Collins and Brown
18. Pro Techniques of People Photography	Gary Bernstein, HP Book, USA
19. Collins Complete Guide to Photography	Michael Freeman, Harper Collins Publishers
20. Visual Anthropology: Photography as a research Method	Collier and Collier, 1986
21. Visual Methods in Social Research	Marcus Banks, Sage Publications, 2002

(b) Reference Magazines, Journals and other sources:

- National Geographic
- Better Photography
- Asian Photography
- Times Journal of Photography
- Internet

PRACTICAL:

Suggested lisi of assignments / activities:

Assignment 1	
Details/ description of assignment	Shooting of Surface textures and Motifs; 1 series of 10 photographs
Evaluation parameter	- Clarity and use of the camera to define the subject well. - Storytelling through good colour and composition - Balance between the achieved photograph and the 100 word write up. - Understand the various constituent parts & processes in a microenvironment. - Understand & use the essential techniques of visual/graphic documentation and presentation - Use of personal interpretation in visual documentation - Visual appreciation and understanding of the subject, analysis and interpretation - Photo documentation as a means of telling a shared or individual narrative - Attendance & Consistency - Understand the basic principles of photography - Quality of information collected and presented
Assignment 2	
Details/ description of assignment	Doing a colour story; the objective of this exercise is to do a visual essay and narrate a story only through 20 images or less.
Evaluation parameter	- Use of personal interpretation in visual documentation - Visual appreciation and understanding of the subject, analysis and interpretation - Photo documentation as a means of telling a shared or individual narrative - Understand the basic principles of photography - Quality of information collected and presented
Learning outcome	- Overview and microcosmic view of socio cultural environment related to craft sectors. - Awareness of the various aspects of photography as a tool for documentation and communication - Ability to appreciate and create stylish visual representation. - Ability to use the image as a means to convey one's own ideas and expressions - Awareness, interaction & experience of Craft related environment through photo documentation.