DIPLOMA IN ENGINEERING AND TECHNOLOGY

1066

DEPARTMENT OF GARMENT TECHNOLOGY

SEMESTER PATTERN

N – SCHEME

IMPLEMENTED FROM 2020 - 2021

CURRICULUM DEVELOPMENT CENTRE

DIRECTORATE OF TECHNICAL EDUCATION
CHENNAI-600 025, TAMIL NADU

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU
DIPLOMA INENGINEERING / TECHNOLOGY SYLLABUS

N SCHEME

(Implemented from the Academic Year 2020 - 2021 onwards)

Chairperson

TMT.G.LAXMI PRIYA I.A.S.
Director,
Directorate of Technical Education, Guindy, Chennai.

Co-ordinator

Dr. V.Srinivasan

Principal i/c
P.A.C. Ramasamy Raja Polytechnic College, Rajapalayam – 626 108

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Principal i/c& HOD / Textile and Marketing Management
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DIPLOMA COURSES IN ENGINEERING/TECHNOLOGY

(SEMESTER SYSTEM)

(Implemented from 2020 - 2021)

N – SCHEME

R E G U L A T I O N S*

***Applicable to the Diploma Courses other than Diploma in Hotel Management & Catering Technology.*

1. Description of the Course:

a. Full Time (3 years)

The Course for the Full Time Diploma in Engineering shall extend over a period of three academic years, consisting of 6 semesters* and the First Year is common to all Engineering Branches.

b. Sandwich (3½ years)

The Course for the Sandwich Diploma in Engineering shall extend over a period of three and half academic years, consisting of 7 semesters* and the First Year is common to all Engineering Branches. The subjects of three years full time diploma course being regrouped for academic convenience.

During 4th and/or during 7th semester the students undergo industrial training for six months / one year. Industrial training examination will be conducted after completion of every 6 months of industrial training.

c. Part Time (4 years)

The course for the Part Time Diploma in Engineering shall extend over a period of 4 academic years containing of 8 semesters*, the subjects of 3 year full time diploma courses being regrouped for academic convenience.

* ***Each Semester will have 16 weeks duration of study with 35 hrs. / Week for Regular Diploma Courses and 18 hrs. / Week for Part-Time Diploma Courses.***

The Curriculum for all the 6 Semesters of Diploma courses (Engineering & Special Diploma Courses viz. Textile Technology, Leather Technology, Printing Technology,

Chemical Technology etc.) have been revised and revised curriculum is applicable for the candidates admitted from 2020 – 2021 academic year onwards.

2. Condition for Admission:

Condition for admission to the Diploma courses shall be required to have passed in The S.S.L.C Examination of the Board of Secondary Education, Tamil Nadu.

(Or)

The Anglo Indian High School Examination with eligibility for Higher Secondary Course in Tamil Nadu.

(Or)

The Matriculation Examination of Tamil Nadu.

(Or)

Any other Examinations recognized as equivalent to the above by the Board of Secondary Education, Tamil Nadu.

Note: In addition, at the time of admission the candidate will have to satisfy certain minimum requirements, which may be prescribed from time to time.

3. Admission to Second year (Lateral Entry):

A pass in HSC (academic) or (vocational) courses mentioned in the Higher Secondary Schools in Tamil Nadu affiliated to the Tamil Nadu Higher Secondary Board with eligibility for University Courses of study or equivalent examination & Should have studied the following subjects.

A pass in 2 Years ITI with appropriate Trade or Equivalent examination.

Sl. No	Courses	H.Sc Academic	H.Sc Vocational		Industrial Training Institutes Courses
		Subjects Studied	Subjects Studied		
			Related subjects	Vocational subjects	
1.	All the Regular and Sandwich Diploma Courses	Physics and Chemistry as compulsory along with Mathematics / Biology	Maths / Physics / Chemistry	Related Vocational Subjects Theory& Practical	2 years course to be passed with appropriate Trade

2.	Diploma Course in Commercial Practice	English & Accountancy English & Elements of Economics English & Elements of Commerce	English & Accountancy, English & Elements of Economics, English & Management Principles & Techniques, English & Typewriting	Accountancy & Auditing, Banking, Business Management, Co-operative Management, International Trade, Marketing & Salesmanship, Insurance & Material Management, Office Secretaryship.	-

- For the Diploma Courses related with Engineering/Technology, the related / equivalent subjects prescribed along with Practicals may also be taken for arriving the eligibility.
- Branch will be allotted according to merit through counseling by the respective Principal as per communal reservation.
- For admission to the Textile Technology, Leather Technology, Printing Technology, Chemical Technology and Commercial Practice Diploma courses the candidates studied the related subjects will be given first preference.

- *Candidates who have studied Commerce Subjects are not eligible for Engineering Diploma Courses.*

4. Age Limit: No Age limit.

5. Medium of Instruction: English

6. Eligibility for the Award of Diploma:

No candidate shall be eligible for the Diploma unless he/she has undergone the prescribed course of study for a period of not less than 3 academic years in any institution affiliated to the State Board of Technical Education and Training, Tamil Nadu, when joined in First Year and two years if joined under Lateral Entry scheme in the second year and passed the prescribed examination.

The minimum and maximum period for completion of Diploma Courses are as given below:

Diploma Course	Minimum Period	Maximum Period
Full Time	3 Years	6 Years
Full Time (Lateral Entry)	2 Years	5 Years
Sandwich	3½ Years	6½ Years
Part Time	4 Years	7 Years

This will come into effect from N Scheme onwards i.e. from the academic year 2020-2021.

7. Subjects of Study and Curriculum outline:

The subjects of study shall be in accordance with the syllabus prescribed from time to time, both in theory and practical subjects.

The curriculum outline is given in Annexure – I.

8. Examinations:

Board Examinations in all subjects of all the semesters under the scheme of examinations will be conducted at the end of each semester.

The internal assessment marks for all the subjects will be awarded on the basis of continuous internal assessment earned during the semester concerned. For each subject 25 marks are allotted for internal assessment. Board Examinations are conducted for 100 marks and reduced to 75.

The total marks for result are 75 + 25 = 100 Marks.

9. Continuous Internal Assessment:

A. For Theory Subjects:

The Internal Assessment marks for a total of 25 marks, which are to be distributed as follows:

i) Subject Attendance **5 Marks**

(Award of marks for subject attendance to each subject Theory/Practical will be as per the range given below)

80%	-	83%	1 Mark
84%	-	87%	2 Marks
88%	-	91%	3 Marks
92%	-	95%	4 Marks
96%	-	100%	5 Marks

ii) Test # **10 Marks**

2 Tests each of 2 hours duration for a total of 50 marks are to be conducted. Average of the these two test marks will be taken and the marks to be reduced to:	05 Marks
The Test – III is to be the Model Examination covering all the five units and the marks obtained will be reduced to :	05 Marks

TEST	UNITS	WHEN TO CONDUCT	MARKS	DURATION
Test I	Unit – I & II	End of 6th week	50	2 Hrs
Test II	Unit – III & IV	End of 12th week	50	2 Hrs
Test III	**Model Examination:** Covering all the 5 Units. (Board Examinations-question paper-pattern).	End of 16th week	100	3 Hrs

From the Academic Year 2020 – 2021 onwards.

Question Paper Pattern for the Test - I and Test – II is as follows. The tests should be conducted by proper schedule. Retest marks should not be considered for internal assessment.

Without Choice:

Part A Type questions:	6 Questions × 1 mark	06 marks
Part B Type questions:	7 Questions × 2 marks	14 marks
Part C Type questions:	2 Questions × 15 marks	30 marks
	Total	**50 marks**

iii) Assignment **5 Marks**

For each subject Three Assignments are to be given each for 20 marks and the average marks scored should be reduced for 5 marks.

iv) Seminar Presentation **5 Marks**

The students have to select the topics either from their subjects or general subjects which will help to improve their grasping capacity as well as their capacity to express the subject in hand. The students will be allowed to prepare the

material for the given topic using the library hour and they will be permitted to present seminar (For First and Second Year, the students will be permitted to present the seminar as a group not exceeding six members and each member of the group should participate in the presentation. For the Third Year, the students should present the seminar individually.) The seminar presentation is mandatory for all theory subjects and carries 5 marks for each theory subject. The respective subject faculty may suggest topics to the students and will evaluate the submitted materials and seminar presentation. (2 ½ marks for the material submitted in writing and 2 ½ marks for the seminar presentation). For each subject minimum of two seminars are to be given and the average marks scored should be reduced to 5 marks.

All Test Papers, Assignment Papers / Notebooks and the seminar presentation written material after getting the signature with date from the students must be kept in safe custody in the department for verification and audit. It should be preserved for one semester after publication of Board Exam results and produced to the flying squad and the inspection team at the time of inspection/verification.

B. <u>For Practical Subjects:</u>

The Internal Assessment mark for a total of 25 marks which are to be distributed as follows:-

a) Attendance : **5 Marks**
(Award of marks same as theory subjects)

b) Procedure/ observation and tabulation/
Other Practical related Work : **10 Marks**

c) Record writing : **10 Marks**

TOTAL : **25 Marks**

- *All the Experiments/Exercises indicated in the syllabus should be completed and the same to be given for final Board examinations.*
- The observation note book / manual should be maintained for 10 marks. The observation note book / manual with sketches, circuits, programme, reading and calculation written by the students manually depends upon the practical subject during practical classes should be evaluated properly during the practical class hours with date.

- The Record work for every completed exercise should be submitted in the subsequent practical classes and marks should be awarded for 10 marks for each exercise as per the above allocation.
- At the end of the Semester, the average marks of all the exercises should be calculated for 20 marks (including Observation and Record writing) and the marks awarded for attendance is to be added to arrive at the internal assessment mark for Practical. (20+5=25 marks)
- Only regular students, appearing first time have to submit the duly signed bonafide record note book/file during the Practical Board Examinations.

All the marks awarded for Assignments, Tests, Seminar presentation and Attendance should be entered periodically in the Personal Theory Log Book of the staff, who is handling the theory subject.

The marks awarded for Observation, Record work and Attendance should be entered periodically in the Personal Practical Log Book of the staff, who is handling the practical subject.

10. Communication Skill Practical, Computer Application Practical and Physical Education:

The Communication Skill Practical and Computer Application Practical with more emphasis are being introduced in First Year. Much Stress is given to increase the Communication skill and ICT skill of students.

As per the recommendation of MHRD and under Fit India scheme, the Physical education is introduced to encourage students to remain healthy and fit by including physical activities and sports.

11. Project Work and Internship:

The students of all the Diploma Courses have to do a Project Work as part of the Curriculum and in partial fulfillment for the award of Diploma by the State Board of Technical Education and Training, Tamil Nadu. In order to encourage students to do worthwhile and innovative projects, every year prizes are awarded for the best three projects i.e. institution wise, region wise and state wise. **The Project work must be reviewed twice in the same semester. The project work is approved**

during the V semester by the properly constituted committee with guidelines.

a) Internal assessment mark for Project Work & Internship:

Project Review I	…	**10 marks**
Project Review II	…	**10 marks**
Attendance	…	**05 marks** (Award of marks same as theory subject pattern)
Total	…	**25 marks**

Proper record should be maintained for the two Project Reviews and preserved for one semester after the publication of Board Exams results. It should be produced to the flying squad and the inspection team at the time of inspection/verification.

b) Allocation of Marks for Project Work & Internship in Board Examinations:

Demonstration/Presentation	25 marks
Report	25 marks
Viva Voce	30 marks
Internship Report	20 marks
Total	**100* marks**

*Examination will be conducted for 100 marks and will be converted to 75 marks.

c) Internship Report:

The internship training for a period of two weeks shall be undergone by every candidate at the end of IV / V semester during vacation. The certificate shall be produced along with the internship report for evaluation. The evaluation of internship training shall be done along with final year “Project Work & Internship” for 20 marks. The internship shall be undertaken in any industry / Government or Private certified agencies which are in social sector / Govt. Skill Centres / Institutions / Schemes.

A neatly prepared PROJECT REPORT as per the format has to be submitted by individual student during the Project Work & Internship Board examination.

12. Scheme of Examinations:

The Scheme of examinations for subjects is given in Annexure - II.

13. Criteria for Pass:

1. No candidate shall be eligible for the award of Diploma unless he/she has undergone the prescribed course of study successfully in an institution approved by AICTE and affiliated to the State Board of Technical Education & Training, Tamil Nadu and pass all the subjects prescribed in the curriculum.

2. A candidate shall be declared to have passed the examination in a subject if he/she secures not less than *40% in theory subjects* and *50% in practical subjects* out of the total prescribed maximum marks including both the Internal Assessment and the Board Examinations marks put together, subject to the condition that he/she secures at least a minimum of *40 marks out of 100 marks in the Board Theory Examinations and a minimum of 50 marks out of 100 marks in the Board Practical Examinations.*

14. Classification of successful candidates:

Classification of candidates who will pass out the final examinations from April 2023 onwards (Joined first year in 2020 -2021) will be done as specified below.

First Class with Superlative Distinction:

A candidate will be declared to have passed in **First Class with Superlative Distinction** if he/she secures not less than 75% of the marks in all the subjects and passes all the semesters in the first appearance itself and passes all subjects within the stipulated period of study 2 / 3 / 3½ / 4 years [Full time(lateral entry)/Full Time/Sandwich/Part Time] without any break in study.

First Class with Distinction:

A candidate will be declared to have passed in **First Class with Distinction** if he/she secures not less than 75% of the aggregate marks in all the semesters put together and passes all the semesters except the I and II semester in the first appearance itself and passes all subjects within the stipulated period of study 2 / 3 / 3½ / 4 years [Full time(lateral entry)/Full Time/Sandwich/Part Time] without any break in study.

First Class:

A candidate will be declared to have passed in **First Class** if he/she secures not less than 60% of the aggregate marks in all the semesters put together and passes all the subjects within the stipulated period of study 2 / 3 / 3½ / 4 years [Full time(lateral entry)/Full Time/Sandwich/Part Time] without any break in study.

Second Class:

All other successful candidates will be declared to have passed in **Second Class.**

The above classifications are also applicable for the Sandwich / Part-Time students who pass out Final Examination from October 2023 /April 2024 onwards (both joined First Year in 2020 -2021)

15. Duration of a period in the Class Time Table:

The duration of each period of instruction is 1 hour and the total period of instruction hours excluding interval and lunch break in a day should be uniformly maintained as 7 hours corresponding to 7 periods of instruction (Theory & Practical).

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DIPLOMA IN GARMENT TECHNOLOGY

COURSE CODE - 1066

Description of the Course with Objectives:

Diploma course in Garment technology deals with the design development and manufacturing of Ready-made garments. The fabrics after subjecting to various wet processes like bleaching, dyeing, printing and finishing etc., are made into garment form. At present the marketability of Made-ups, readymade garments is very good both in the national and international market. Different decorative elements are also incorporated in readymade garments so as to increase their sales value and earn valuable foreign currency, which our country needs now.

Garment industry is competitive, Cost conscious and Labour intensive. From cottage industry to mega corporations are functioning in this sector where requirement of quality manpower is huge both in India and abroad as well. The need of the industry is quality technicians, designers, administrators, planners, quality controllers etc. Garment industry is a value added industry with the possibility of location freedom. It can be located at village levels are in the big metros. Also it can employ low level skilled people to high tech engineers. Both centralized and decentralized operations are possible depending upon the cost, time and space requirement. Out sourcing of job, distribution of jobs to across National boundaries is more often than the norm.

India is in an ideal position due to centuries old tradition, skilled manpower, abundant natural resources etc. Also the opportunities and challenges are huge therefore we need well-educated trained manpower to utilize this evergreen, modular almost non-polluting industry.

After spinner makes yarn, weaver/knitter makes fabric and textile processor bleaches, colours and finally finishes the fabric, the work of the garment maker starts. Usually garments are not much made out of grey fabric due to poor dye absorbency, unattractive natural colour present on the fabric. Since the sale of garments is on the increase as compared with fabric in both local and export market, it is very essential to have this technology imparted to students who will get lot of job opportunities in garment factories, which are located throughout our country. In fact, there is a demand from the local market for a designer who knows garment designing and garments manufacturing. The subjects which are of prime importance for a garment technologists namely Fibre Science, Yarn & Fabric manufacture, Wet processing, Testing of Textiles

(both physical and chemical testing), apparel designing, fashion designing, Pattern making, garment construction, home textiles and finishing of various type of garments & apparel, production process, Quality control, Merchandising and Management of industries are dealt in this N-scheme syllabus in depth wherever possible. Besides, computer programming and its applications to Garment fashion designing is also included.

Sufficient practical subjects are also included for supporting theory subjects. The expectation from the students is that, after completing the course, they should be in a position to select goods suitable for garment making, designing fashionable garments and finally, stitch them to make the finished product. Industrial visits, In-plant training, Guest lecture, Seminars, Study tours and Project work/Project report gives students scope for working individually and this to a greater extent improves the self-reliance of the students.

Students who study this course will have immense scope for self-employment and employment in supervisory and finally in managerial level in established garment manufacturing unit. Due to recent boost in the export of ready-made garments, the scope for this course at present is very high and there is no doubt that the demand will go on increasing in the years to come.

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ANNEXURE – I
STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU
DIPLOMA IN ENGINEERING / TECHNOLOGY SYLLABUS
COURSE CODE: 1066
DIPLOMA IN GARMENT TECHNOLOGY – FULL TIME

N-SCHEME
(Implemented from the Academic year 2020-2021 onwards)

CURRICULUM OUTLINE

FIRST SEMESTER (FULL TIME)

Col. No.	Subject Code	Subject	Hours Per Week				
			Theory	Drawing	Tutorial	Practical	Total
1	40011	Communicative English I	5				5
2	40012	Engineering Mathematics I	5				5
3	40013	Engineering Physics I	5				5
4	40014	Engineering Chemistry I	5				5
5	40015	Engineering Graphics I		6			6
6	40006	Engineering Physics Practical (semester examination in the second semester)				2	2
7	40007	Engineering Chemistry Practical (semester examination in the second semester)				2	2
8	40001* 40002^	Communication Skill Practical * Computer Application Practical ^				2	2
			20	6		6	32
Extra / Co-Curricular activities		Physical Education					2
		Library					1
Total							35

* For Circuit Branches only
^ For Non-Circuit Branches only

SECOND SEMESTER (FULL TIME)

Col. No.	Subject Code	Subject	Hours Per Week				
			Theory	Drawing	Tutorial	Practical	Total
1	40021	Communicative English II	4				4
2	40022	Engineering Mathematics II	4				4
3	40023	Engineering Physics II	4				4
4	40024	Engineering Chemistry II	4				4
5	40025	Engineering Graphics II		5			5
6	40006	Engineering Physics Practical				2	2
7	40007	Engineering Chemistry Practical				2	2
8	40028	Basics of Industries and Workshop Practical	2			3	5
9	40001* 40002^	Communication Skill Practical * Computer Application Practical ^				2	2
			18	5		9	32
Extra / Co-curricular activities		Physical Education					2
		Library					1
Total							35

* For Non-Circuit Branches only

^ For Circuit Branches only

THIRD SEMESTER

Subject Code	SUBJECT	HOURS PER WEEK			
		Theory Hours	Tutorial / Drawing	Practical hours	Total Hours
4066310	Fibre Science and Yarn Manufacture	5	-		5
4066320	Fashion Designing	5	-		5
4066330	Apparel Designing	5	-		5
4066340	Fashion Designing - Practical		-	5	5
4066350	Embroidery Practical		-	4	4
4066360	Apparel Designing Practical		-	4	4
4066370	Fashion Accessories Practical			4	4
Extra Co-curricular activities	Physical Education			2	2
	Library / Seminar			1	1
TOTAL		15	-	20	35

FOURTH SEMESTER

Subject Code	SUBJECT	HOURS PER WEEK			
		Theory Hours	Tutorial / Drawing	Practical hours	Total Hours
4066410	Apparel Production Planning and Control	5			5
4061420	Technology of Fabric Manufacture^	5			5
4066430	Clothing Machinery and Equipments	5			5
4066440	Pattern Drafting and Construction - I	5			5
4066450	Pattern Drafting - I Practical			4	4
4066460	Garment Construction - I Practical			4	4
4066470	Home Textiles Practical			4	4
Extra Co-curricular activities	Physical Education			2	2
	Library / Seminar			1	1
	Internship – I (2Weeks)	During Summer Vacation			
TOTAL		20		15	35

^ Common with Textile Processing

FIFTH SEMESTER

Subject Code	SUBJECT	HOURS PER WEEK			
		Theory Hours	Tutorial / Drawing	Practical hours	Total Hours
4066510	Chemical Processing and Testing of Textiles	5			5
4066520	Pattern Drafting and Construction -II	5			5
	Elective I				
4066531	Apparel Merchandising	5			5
4066532	Indian and Western Costumes				
4066540	Chemical Processing and Testing of Textiles Practical			4	4
4066550	Pattern Drafting - II Practical			4	4
4066560	Garment Construction - II			5	5
4066570	Entrepreneurship & Start-ups Practical			4	4
Extra Co-curricular activities	Physical Education			2	2
	Library / Seminar			1	1
	Summer Internship –II (2 Weeks)	During Winter Vacation			
TOTAL		15		20	35

SIXTH SEMESTER

Subject Code	SUBJECT	HOURS PER WEEK			
		Theory Hours	Tutorial / Drawing	Practical hours	Total Hours
4060610	Textile Management*	5			5
4066620	Apparel Quality Control	5			5
	Elective II				
4066631	Home Textiles	5			5
4066632	Fashion Draping				
4066640	Advanced Pattern Drafting and Construction Practical			6	6
4066650	Fashion Draping Practical			5	5
4066660	Project work and Internship			6	6
Extra Co-curricular activities	Physical Education			2	2
	Library / Seminar			1	1
TOTAL		15		20	35

*** Common with Textile Technology**

ANNEXURE - II
STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU
DIPLOMA IN ENGINEERING / TECHNOLOGY SYLLABUS
COURSE CODE: 1066
DIPLOMA IN GARMENT TECHNOLOGY – FULL TIME

N-SCHEME
(Implemented from the Academic year 2020-2021 onwards)
SCHEME OF THE EXAMINATION

I SEMESTER

Subject Code	SUBJECT	Examination Marks			Minimum for pass	Duration of Exam in Hours
		Internal Assess-ment marks	Board Exam Marks (Converted to 75)	Total Marks		
40021	Communicative English II	25	100	100	40	3
40022	Engineering Mathematics II	25	100	100	40	3
40023	Engineering Physics II	25	100	100	40	3
40024	Engineering Chemistry II	25	100	100	40	3
40025	Engineering Graphics II	25	100	100	40	3
40006	Engineering Physics Practical	25	100	100	50	3
40007	Engineering Chemistry Practical	25	100	100	50	3
40028	Basics of Industries and Workshop Practical	25	100	100	50	3
40001* 40002^	Communication Skill Practical * Computer Application Practical ^	25	100	100	50	3
Total		900				

* For Circuit Branches only
^ For Non-Circuit Branches only

II SEMESTER

Subject Code	SUBJECT	Examination Marks			Minimum for pass	Duration of Exam in Hours
		Internal Assess-ment marks	Board Exam Marks (Converted to 75)	Total Marks		
40021	Communicative English II	25	100	100	40	3
40022	Engineering Mathematics II	25	100	100	40	3
40023	Engineering Physics II	25	100	100	40	3
40024	Engineering Chemistry II	25	100	100	40	3
40025	Engineering Graphics II	25	100	100	40	3
40006	Engineering Physics Practical	25	100	100	50	3
40007	Engineering Chemistry Practical	25	100	100	50	3
40028	Basics of Industries and Workshop Practical	25	100	100	50	3
40001* 40002^	Communication Skill Practical * Computer Application Practical ^	25	100	100	50	3
Total		900				

* For Non-Circuit Branches only
^ For Circuit Branches only

THIRD SEMESTER

SUBJECT CODE NO	SUBJECT	EXAMINATION MARKS		TOTAL MARKS	MINIMUM PASS MARK	DURATION OF EXAM (HOURS)
		INTERNAL ASSESSMENT MARK	BOARD EXAM MARK (CONVERTED TO 75)			
4066310	Fibre Science and Yarn Manufacture	25	100	100	40	3
4066320	Fashion Designing	25	100	100	40	3
4066330	Apparel Designing	25	100	100	40	3
4066340	Fashion Designing - Practical	25	100	100	50	3
4066350	Embroidery Practical	25	100	100	50	3
4066360	Apparel Designing Practical	25	100	100	50	3
4066370	Fashion Accessories Practical	25	100	100	50	3
Total		700				

FOURTH SEMESTER

SUBJECT CODE NO	SUBJECT	EXAMINATION MARKS		TOTAL MARKS	MINIMUM PASS MARK	DURATION OF EXAM (HOURS)
		INTERNAL ASSESSMENT MARK	BOARD EXAM MARK (CONVERTED TO 75)			
4066410	Apparel Production Planning and Control	25	100	100	40	3
4066420	Technology of Fabric Manufacture^	25	100	100	40	3
4066430	Clothing Machinery and Equipments	25	100	100	40	3
4066440	Pattern Drafting and Construction – I	25	100	100	40	3
4066450	Pattern Drafting – I Practical	25	100	100	50	3
4066460	Garment Construction – I Practical	25	100	100	50	3
4066470	Home Textiles Practical	25	100	100	50	3
Total		700				

^ Common with Textile Processing

FIFTH SEMESTER

SUBJECT CODE NO	SUBJECT	EXAMINATION MARKS		TOTAL MARKS	MINIMUM PASS MARK	DURATION OF EXAM (HOURS)
		INTERNAL ASSESSMENT MARK	BOARD EXAM MARK (CONVERTED TO 75)			
4066510	Chemical Processing and Testing of Textiles	25	100	100	40	3
4066520	Pattern Drafting and Construction – II	25	100	100	40	3
	Elective I					
4066531	Apparel Merchandising	25	100	100	40	3
4066532	Indian and Western Costumes	25	100	100	40	3
4066540	Chemical Processing and Testing of Textiles Practical	25	100	100	50	3
4066550	Pattern Drafting – II Practical	25	100	100	50	3
4066560	Garment Construction – II	25	100	100	50	3
4066570	Entrepreneurship & Start-ups Practical	25	100	100	50	3
Total		700				

SIXTH SEMESTER

SUBJECT CODE NO	SUBJECT	EXAMINATION MARKS		TOTAL MARKS	MINIMUM PASS MARK	DURATION OF EXAM (HOURS)
		INTERNAL ASSESSMENT MARK	BOARD EXAM MARK (CONVERTED TO 75)			
4060610	Textile Management*	25	100	100	40	3
4066620	Apparel Quality Control	25	100	100	40	3
	Elective II					
4066631	Home Textiles	25	100	100	50	3
4066632	Fashion Draping	25	100	100	50	3
4066640	Advanced Pattern Drafting and Construction Practical	25	100	100	50	3
4066650	Fashion Draping Practical	25	100	100	50	3
4066660	Project work and Internship	25	100	100	50	3
Total		600				

*** Common with Textile Technology**

LIST OF EQUIVALENT SUBJECTS FOR M - SCHEME TO N – SCHEME
DIPLOMA IN GARMENT TECHNOLOGY
COURSE CODE: 1066

Sub code	EXISTING SUBJECTS (M – SCHEME)	PROPOSED SUBJECTS (N - SCHEME)	
III SEMESTER			
36631	Fibre Science and Yarn Manufacture	4066310	Fibre Science and Yarn Manufacture
36632	Fashion Designing	4066320	Fashion Designing
36633	Apparel Designing	4066330	Apparel Designing
36634	Fashion Designing Practical	4066340	Fashion Designing Practical
36635	Embroidery Practical	4066350	Embroidery Practical
36636	Apparel Designing Practical	4066360	Apparel Designing Practical
30001	Computer Application Practical	40002	Computer Application Practical
IV SEMESTER			
36641	Apparel Production Planning and Control	4066410	Apparel Production Planning and Control
36142	Technology of Fabric Manufacture	4061420	Technology of Fabric Manufacture
36643	Clothing Machinery and Equipment	4066430	Clothing Machinery and Equipment
36644	Pattern Drafting and Construction – I	4066440	Pattern Drafting and Construction – I
36645	Pattern Drafting – I Practical	4066450	Pattern Drafting – I Practical
36646	Garment Construction– I Practical	4066460	Garment Construction– I Practical
30002	Life Skills and Employability Practical	40001	Life Skills and Employability Practical

V SEMESTER			
36051	Textile Testing*	4060510	Textile Testing*
36052	Textile Wet Processing*	4060520	Textile Wet Processing*
36653	Pattern Drafting and Construction – II	4066520	Pattern Drafting and Construction – II
36671	Apparel Merchandising	4066531	Apparel Merchandising
36672	Indian and Western Costumes	4066532	Indian and Western Costumes
36655	Textile Testing and Wet Processing Practical	4066540	Textile Testing and Wet Processing Practical
36656	Pattern Drafting – II Practical	4066550	Pattern Drafting – II Practical
36657	Garment Construction– II Practical	4066560	Garment Construction– II Practical
VI SEMESTER			
36061	Textile Management *	4060610	Textile Management *
36662	Apparel Quality Control	4066620	Apparel Quality Control
36681	Home Textiles	4066631	Home Textiles
36682	Fashion Draping	4066632	Fashion Draping
36664	Fashion and Garment CAD Practical	NO EQUIVALENT	
36665	Advanced Pattern Drafting and Construction Practical	4066640	Advanced Pattern Drafting and Construction Practical
36666	Fashion Draping Practical	4066650	Advanced Pattern Drafting and Construction Practical
36667	PROJECT WORK	NO EQUIVALENT	

*Common with Diploma in Textile Technology

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066310

Semester: III Semester

Subject Title: FIBRE SCIENCE AND YARN MANUFACTURE

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066310 Fibre Science and Yarn Manufacture	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Natural Fibres	15
II	Man Made Fibres (MMF)	15
III	Yarn Manufacturing Process	15
IV	Post Spinning and Man-Made Filaments Processing	14
V	Commercial Yarns	14
	Test & Model Exam	7
Total		80

RATIONALE:

Textile begins with Fibres. The introduction to Fibre science is the basics for all Textiles and Garment related manufacturing. The application of fibre science makes the industries to produce right kind of products with required properties and end usage. The yarn manufacture part of this section provides a basic knowledge on the manufacturing of different types of yarn in the textile industry. This will make the students to select the appropriate raw material for Garment production.

The various divisions of Fibre science & Yarn Manufacture like Introduction and Natural Fibres, Synthetic Fibres, Yarn Manufacturing Process, Post Spinning and Man Made Filament Processing, Commercial yarns provide the foundation by enlightening the Type of Fibres that dominates the Textile products, the basic production processes of yarn manufacturing and the different types of commercial yarns available in the markets.

OBJECTIVES:

At the end of the study of III Semester the student will be able to

- Understand the classification & importance of Textile fibres.
- Acquire knowledge on properties and uses of Natural, Man-made, Synthetic fibres.
- Understand the properties & uses of specialty fibres.
- Study the manufacturing processes of Viscose Rayon, Polyester and Nylon 6
- Know the production sequence of Combed & Carded yarns.
- Gain knowledge on the latest spun yarn production systems.
- Understand the Post spinning process sequence.
- Learn about Texturisation, its types and manufacturing.
- Understand the types, properties and uses of fancy yarns.
- Study the manufacturing details of sewing thread.

4066310 FIBRE SCIENCE AND YARN MANUFACTURE

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topics	Hours
I	**NATURAL FIBRES** Textile Fibres – Definition – Classification – Important properties of an ideal Textile Fibre. Identification of Textile Fibres - Burning test, Solvent test and Microscopic appearance (Cotton, Silk, Wool, Polyester, Nylon and Acrylic). Cotton fibres – Content – Indian varieties - Properties – uses. Properties of Linen, Flax and Jute fibres. Silk Fibre – Varieties - Degumming of silk – Weighting of silk - Properties - Uses. Wool fibre – Varieties based on fleece – Properties and uses – Comparison between Worsted yarn and Woolen yarn.	15
II	**MAN MADE FIBRES (MMF)** Produced forms of MMF – Flow chart of MMF production - Wet, Melt and Dry spinning system. Viscose rayon – Manufacturing flow chart - Properties and uses. Properties of Lyocell, Modal, Banana and Bamboo. Polyester fibre (PET) – Manufacture flow chart - Properties and uses. Nylon 6-6 fibre – Manufacturing flow chart – Properties and uses. Filament yarn and Staple fibre manufacturing process. Brief study of Nano (Micro) fibres.	15
III	**YARN MANUFACTURING PROCESS** Object of Ginning - Objects of Mixing and Blending - Sequence of processes involved in Carded and Combed yarn manufacturing - Objects of blow room, carding, drawing, comber, simplex & ring frame - Differences between carded and combed yarn. Brief study of open end spinning - Differences between ring yarn and OE yarn - Brief study of Compact, Friction, Vortex and Air-jet spun yarn production systems.	15
IV	**POST SPINNING AND MAN-MADE FILAMENTS PROCESSING**	14

	Objects of Doubling - Passage of material in Ring doubling machine. Objects Two for One Twister - Passage of material in Two for One Twister (TFO). Reeling – Objects – Passage of material in 7 lea reeling machine. Brief study of Bundling & Bale processes. Texturisation - Definition – Objects – Study of texturing of yarn by Draw Texturisation and Air Texturisation methods.	
V	**COMMERCIAL YARNS** Definition of – Slub yarns – Fibre / Color injected yarns – Boucle yarn – Gimp yarn – Spot and Knot yarns – Loop or Curl yarn – Grandrelle yarns – Spiral or Cork screw yarns – Chenille yarn – Covered yarn – Core yarn – Neppy yarn – mélange yarns- Elastomeric yarns – Metallic yarns (No method of production details). Sewing threads – Manufacturing flow chart for cotton and spun polyester sewing thread manufacture, 2 ply & 3 ply yarns. Embroidery threads –Viscose Rayon and Trilobal polyester thread - Properties.	14

TEXT BOOKS:

Title	Authors	Publishers	Year
A Text book of Fibre science and Technology	S.P.Mishra	New Age International Pvt. Ltd, Delhi- 110002	2005
Yarn Preparation	Sengupta	The Textile Institute, Manchester, UK	1970
Textiles Fibre to Fabric	Corbman	Mc Graw-Hill international editions, Singapore	1983
Textile Science	E.P.G. Gohl, L.D.Vilensky	CBS Publishers & Distributers, Delhi.	1990
Textile Terms and definitions	The Textile Institue, UK	The Textile Institue, UK	1975
Man-Made fibres	William Moncrieff	Butter worth & Co. Ltd., London	1975

REFERENCE BOOKS:

Title	Authors	Publishers	Year
Manual of cotton Spinning	Shirley. C	The Textile Institute, Manchester, UK	1965
Practical guide to opening & Carding	Klein.W	The Textile Institute, Manchester, UK	1987
Open End Spinning	Rohlena	Elscvier Scientific Publishing Co.,	1974
Handbook of Textile fibres Vol I & II- Natural Fibres	J.Gardon Cook	Wood Head Publishing Ltd	2005
Spinning of Man-mades and Blends on Cotton	Salhotra K R	Textile Association(India), Mumbai	-

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066320

Semester: III Semester

Subject Title: FASHION DESIGNING

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066320 Fashion Designing	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Elements & Principles of Design	15
II	Colour aspects	15
III	Design Development	15
IV	Wardrobe Planning	14
V	Fashion Industry	14
	Test & Model Exam	7
Total		80

RATIONALE:

Garments are the value added products of Textiles, which improves the economy of our country. Fashion designing is part of the subject which enhances the value of the products further. The fashion designing subject provides in depth knowledge on sketching, drawing, colouring, creation of styles, illusions and fashion industry work nature.

OBJECTIVES:

At the end of the study of III Semester the student will be able to

- Understand the elements and principles of fashion design
- Study the tools & equipment used in sketching.
- Learn about the colour theory.
- Learn about the colour scheme.
- Understand the procedure for making proper color schemes.
- Know how to prepare different kinds of board preparation
- Study about various patterns and to develop designs
- Analyze wardrobe planning & lifestyle
- Develop designs for various seasons
- Understand the systems of fashion industry
- Learn steps involved in fashion forecasting

4066320 FASHION DESIGNING

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topics	Hours
I	**ELEMENTS & PRINCIPLES OF DESIGN** Terminology in fashion – Fashion cycle – Elements of designs - Different types of lines on dresses - Illusion created by Lines - Different types of dress Shapes - Different types of Texture on dresses - Color - Light and Shade effects on dresses. Principles of Design - Unity on dress - Proportion on dress - Balance on dress - Emphasis on dress - Rhythm on dress. Objects of Radiation and Gradation on dress. Equipments for sketching - different types of pencils, markers, brushes, papers.	15
II	**COLOR ASPECTS** Introduction to colour theory - Pigment colour theory – Primary, Secondary, Intermediate and Tertiary colours in pigment theory – Study of 12 colour wheel. Study of Colour dimensions - Hue, Value, Intensity, and Tints & Shades - Warm and Cool colours. Study of Colour Scheme - Related colour scheme - Mono chromatic, Neutral, Analogous Contrast colour scheme - Simple contrast, Double contrast, Split, Triad - Psychology of colour on dress – color harmony -Application of colour on different seasons – Munsel theory of color.	15
III	**DESIGN DEVELOPMENT** Design development – Motif – Definition – Types of motifs – Development of motifs – Motifs on the fabrics – Steps in design development – Sources of Inspirations – Design development through natural sources. Study of Pattern in fabrics - Naturalistic abstract - Conventional – Geometric - Animate - Abstract - floral design – Half drop design & Reverse half drop design. Study of Structural and Decorative Design - Different types of Structural design on dress - Different types of decorative design on dress - Characteristics of good decorative design.	15

IV	**WARDROBE PLANNING** Theories of clothing - Classification of clothing - Detail of wardrobe - Study of Wardrobe plan - Factors affecting wardrobe planning - Economic factors - Social factors. Factors influencing personality - Pre-existing wardrobe analysis - Wardrobe plans for Teen age and middle age people - Dress for occasions - Dress for seasons. Purchase planning - Selection of materials. Formal wear, Casual wear, Leisure wear and Accessories.	14
V	**FASHION INDUSTRY** Development of Mood board, Fabric board & Portfolio. Work of Fashion Director - Work of Fashion Designer – Well known fashion designer of India, USA, UK, and France - Fashion capitals - Fashion shows and its importance – Procedure to conduct fashion show – Importance of Fashion magazines – Importance of Fashion forecasting and steps involved in forecasting.	14

Text Book:

Title	Author	Publisher	Year
Illustrating Fashion	Kathryn McKelvey& Janine Munslow	Blackwell Publishing	**2005**
Fashion Design Process, Innovation & Practice	Kathryn McKelvey& Janine Munslow	Blackwell Publishing	**2003**
Art in everyday life	Goldstein and Goldstein	-do-	
Elements of Design & Apparel Design	Sumathi.G.J	New Age International, Delhi	**2002**

Reference:

Title	Author	Publisher	Year
The Psychology of dress	Frank Alvah	Double day Page & Co.	**1982**
The arts of costume & Personal appearance	Grace Margarit Morton	John wiley &Sons London.	**1985**
How you look and dress	Byrta Carson	Mcgraw - Hill Book co.London.	**1981**
Fabrics and dress	Ruthtone and Tarplay	Houghton Mifflin London	**1981**
Elementry Costume design	Harisonfeather	John Wiley and Sons Stone Dorothy	**1983**
Dress Designing	H.F.Kepworth	The English Univ. Press Ltd., London	**1981**
Individuality and Cloths	Margaret story	Funle &Wsanalls Lippion cott.	**1985**
Essential of Design	Degrmo Winslow	Macillion Co. New York.	**1986**
Men's wardrobe	Thames and Hudson	London	**1996**
Art & Fashion	Dr.Alice Mackrell	Batsford Publication	**2005**

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066330

Semester: III Semester

Subject Title: APPAREL DESIGNING

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066330 Apparel Designing	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Basics of Apparel Design	15
II	Pattern Layout	15
III	Seam, Seam finishes & Plackets	15
IV	Yoke, Collars & Sleeves	14
V	Cuffs, Pockets & Fullness	14
	Test & Model Exam	7
Total		80

RATIONALE:

Style of every garment needs various design techniques for improvising the garment. The garment construction includes various types of stitches, seams, collars, cuffs, plackets, pockets, neckline finishes and fullness effect. Each and every item is used depending on the style, the personality of the wearer, the occasions and the aesthetics. This subject enriches the knowledge on the design techniques of the various parts of the garment so as to make it perfect and beautiful.

OBJECTIVES:

At the end of the study of III Semester the student will be able to

- Understand the importance of Human Anatomy.
- Understand the types of figures.
- Learn the basics of Measurements and Garment construction.
- Learn different types of layout, Marker and Marker efficiency.
- Learn different types of Seams.
- Understand the types of Plackets.
- Understand the types of Yokes.
- Study the selection of Collars and Neckline finishes.
- Know about Sleeves and its types.
- Learn different types of Pockets.
- Understand the types of Darts, Pleats and Tucks.
- Understand the types of Gathers Shirrs, Flares and Frills.

4066330 APPAREL DESIGNING

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topics	Hours
I	**BASICS OF APPAREL DESIGN** Eight head theory and its importance in apparel manufacturing – Relative length and girth measurement - Garment Construction Tools & Equipment **–** Measuring, Marking, Cutting, Pressing and General tools. Measurements – Importance - Procedure for taking measurements and Various body measurements for Kid's, Lady's & Gent's. Pattern – Definition and importance - Types - merits and demerits of patterns. Types of Figure – Proportionate, Corpulent figure, Semi corpulent figure, Stooping figure – Erect figure. Common irregularities of male – Slope shoulder – Square shoulder - Bow leg – Knock knee.	15
II	**PATTERN LAYOUT** Fabric grains – types of grain and its importance. Principles in pattern making – Pattern layout and its importance – Principles in pattern layout – Different types fabric folding for layout – Special types of Layout – Procedure for economical layout- Insufficient fabric layout – Marshdan layout for bulk production and its importance –Type of Lays – Lay length and marker – Marker efficacy – Lay efficiency.	15
III	**SEAMS, SEAM FINISHES & PLACKETS** Seams – Definition- Different types of seams- Plain, French, Welt seam, Top stitch seam. Seam finishes- Piped, crossed, Bound and Pinked. Hems – definition – Types of hems – Slip, Catch stitch, Invisible, Herring bone. Plackets & Openings – definition- characteristics of good plackets – One piece, Two pieces, Tailored and Zipper plackets.	15
IV	**YOKE, COLLARS & SLEEVES** Yoke – definition- selection of yoke design. Different types of yokes (Partial, Midriff, and Yoke with fullness). Collars – Types of collar like	14

	Shirt, Stand, Ruffle, Roll, Shawl, Peter pan, Square. Neck line types and Neck line finishes. Sleeves – types of sleeves such as Plain, Puff, Bell, Circular, Leg-O-mutton, Magyar, and Raglan sleeves.	
V	**CUFFS, POCKETS & FULLNESS** Types of cuffs - Round, Gauntlet and pointed. Pockets - Different types of pockets such as Patch, Welt, front Hip and Set in pocket. Fullness – definition - Single and double pointed darts - Relocation of dart by slash and spread method - Types of tucks like pin tuck, cross tuck, piped tuck, shell tuck and its importance - Types of pleats like Knife pleat, Box pleat, Kick pleat, Cartridge pleat, Pinch pleat and its importance - Gathers and Frills.	14

Text Book:

Title	Author	Publisher	Year
Practical clothing construction Part I& II	Mary Mathews	Bhattarans Reprographics (P) Ltd., Chennai.	**1974**
The Art of Sewing	Anna Jacob Thomas	UBS Publisher,Delhi	**2001**
Practical dress Design	Enwin, M.D.	The MacMillan Comp., New York.	**1982**

Reference:

Title	Author	Publisher	Year
Complete guide to sewing	Reader's digest sewing guide	The reader's digest Association, Inc. New York.	**1976**

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066340

Semester: III Semester

Subject Title: FASHION DESIGNINGPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066340 Fashion Designing Practical	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

In Diploma level engineering education skill development plays a vital role. The skill development can be achieved by providing practical experience in creating sketches and drawings of fashionable styles of garment for various purposes. The colour aspects and illusion effects are also understood through drawings.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate drawing table for exposing the skills in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than three students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Experiment	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES:

1. HUMAN ANATOMY
   - To draw male and female figure using Eight head theory.
2. APPAREL DESIGNING
   - To design and draw Basic garment shapes, pleats, collars.
3. COLOUR
   - To draw 12 colour wheel.
   - To draw Colour board for related colour scheme.
   - To draw Colour board for contrasting colour scheme.
   - To draw Warm and Cool clours.
4. STYLE DRAWING
   - To draw Garment for men based on your own taste.
   - To draw Garment for women based on your own taste.

THIRD SEMESTER

FASHION DESIGNING PRACTICAL

LIST OF EQUIPMENT

Drawing table - 30 No

Materials required :

Chart paper- A4/ A3 size- 30 No / experiment / batch of 30 students

Drawing tools &colouringtools- 30 No /experiment / batch of 30 students

LIST OF EXPRIEMENTS

1. Draw Male and Female figures using Eight head theory.
2. Draw basic garment shapes- pleats, collars etc.
3. Prepare 12 colour wheel charts.
4. Prepare chart for Tint and Shade.
5. Prepare colour board for Mono chromatic Colour Scheme.
6. Prepare colour board for Analogous Colour Scheme.
7. Prepare colour board for Complimentary Colour Scheme.
8. Prepare colour board for Simple Contrast Colour Scheme.
9. Prepare colour board for Split Contrast Colour Scheme.
10. Prepare colour board for Warm and cool colours.
11. Design a garment for Men based on your own taste.
12. Design a garment for Women based on your own taste.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066350

Semester: III Semester

Subject Title: EMBROIDERYPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066350 Embroidery Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Value addition to garment and made-ups are achieved through enriching the products with decorative items. Embroidery is one of the decorative techniques and is made either through Hand or Machine embroidery. Now a day's both domestic and international market demand is towards embroidered textile and garment materials.

This practical subject provides hands on experience on the types of embroidery techniques, the stitches and the type of tools and equipment used in garment industry.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machines with embroidery frame and threads for exposing the skills in the laboratory.
- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Experiment	60 marks
Write up	30 marks
Viva	10 marks
Total	100 marks

OBJECTIVES OF THE EXPERIMENTS:

HAND EMBROIDERY

- To practice Running & Double running stitches.
- To practice Stem & Back stitches.
- To practice Chain Stitch & three of its variations.
- To practice Lazy Daisy Stitch.
- To practice Button hole Stitch.
- To practice Blanket stitch.
- To practice Fly Stitch.
- To practice Fish-Bone & herring bone stitches.
- To practice Feather.
- To practice Knot.
- To practice Satin Stitch
- To practice Zardoshi work.
- To practice Stone work.

LIST OF EQUIPMENT

1. **Hand / Machine embroidery tools & machineries:-**
   - Embroidery frame- 30 No.
   - Hand needles- 30 No.
   - Tracing wheel- 30 No.
   - Thimbles- 30 No.
2. **Materials required:**
   - 2 meter fabric/ expt/ batch of 30 students
   - 1 meter Non-woven or Sponge sheet / experiment / batch of 30 students
   - 10 sheets of tracing paper/ experiment /batch of 30 students
   - Embroidery threads- 30skeins of assorted colors/ experiment / batch of 30 students.

LIST OF EXPERIMENTS

1. Prepare Embroidery Design using Running Stitch & Double running stitch.
2. Prepare Embroidery Design using Stem Stitch & Back stitch.
3. Prepare Embroidery Design using Stem Back stitch
4. Prepare Embroidery Design using Chain Stitch.
5. Prepare Embroidery Design using Lazy Daisy Stitch.
6. Prepare Embroidery Design using Button hole Stitch.
7. Prepare Embroidery Design using Blanket Stitch.
8. Prepare Embroidery Design using Fly Stitch or Feather stitch.
9. Prepare Embroidery Design using Fish-Bone or Herring bone.
10. Prepare Embroidery Design using Knot stitch.
11. Prepare Embroidery Design using Satin Stitch.
12. Prepare Embroidery Design using Zardoshi and stone work.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implements to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066360

Semester: III Semester

Subject Title: APPAREL DESIGNINGPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066360 Apparel designing Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Style of every garment needs various design techniques for the parts of the garment. The garment construction includes various types of stitches, seams, collars, cuffs, plackets, pockets, neckline finishes and fullness effect. This practical subject provides hands on experience on the preparation of stitches, seams, collars, cuffs, plackets, pockets, neckline finishes and fullness effect that are major items of garment construction.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machines and required attachments for exposing the skills in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Experiment	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES OF THE EXPERIMENTS:

Seams, Seam finishes & Hems

- To Construct Seams – Plain, French, Welt seam- Top stitch seam,
- To Construct seam finishes- Piped, crossed, Bound, Pinked
- To Construct Hems– Slip, Catch stitch, Invisible, Herring bone.

Plackets & Pockets

- To Construct Plackets– One piece, two piece, Tailored, Zipper.
- To Construct Pockets– Patch, Welt, Bound, front Hip and Pocket in seam pockets.

Sleeves

- To prepare patterns and Construct Plain sleeve.
- To prepare patterns and Construct Puff sleeve
- To prepare patterns and Construct Bell sleeve.

Collars

- To prepare patterns and Construct Shirt collar.
- To prepare patterns and Construct Peter pan collar.

- To prepare patterns and Construct Shawl collar.

Darts, Pleats and Tucks

- To Construct different types of Darts.
- To Construct Knife, Box, Cartridge and Pinch pleats.
- To Construct Tucks– pin tuck, cross tuck, piped tuck, shell tuck.

Frills, Gathers & Neck line finishes

- To construct different types of Frills and Gathers.
- To construct Neck Line Finishes– facings and bindings.

LIST OF EQUIPMENT

Equipment required:

- Measuring tools
- Pattern making tools
- Construction tools
- General tools
- Sewing machines: - Lock stitch- 15 m/cs.
  Over lock- 1 m/c.
  Flat lock- 1 m/c
  Buttonhole- 1 m/c
  Button stitch- 1 m/c

Materials required:

- 3- 5 meters of fabric/ experiment / batch of 30 students.
- Sewing threads: - white and assorted – 30 nos.

LIST OF EXPREIMENTS

1. Construct different types of Seams – any three.
2. Construct different types of Hems– any three.
3. Construct different types of Plackets– any three.
4. Construct different types of Pockets– any three.
5. Prepare patterns and Construct any two sleeves.
6. Prepare patterns and Construct Shirt collar.
7. Prepare patterns and Construct Peter pan collar.
8. Construct different types of Darts.
9. Construct Knife, Box, Cartridge and Pinch pleats.
10. Construct different types of Tucks– any three.
11. Construct different types of Frills and Gathers.
12. Construct different types of Neck Line Finishes– any two

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066370

Semester: III Semester

Subject Title: FASHION ACCESSORIESPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066370 Fashion Accessories Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

This paper will enable the students to design fashion accessories for men, women and children independently without any assistance. They will be able to develop and design complex fashion accessories by learning to design different accessories manually. They will be able to coordinate the fashion accessories to the dress style as well as to the purpose for which they design the garment formal or informal.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

OBJECTIVES OF THE EXPERIMENTS:

- To provide opportunity for skill development in designing accessories.
- To impart knowledge on fashion accessories and creativity.
- To provide knowledge on Foot wear, Handbags & Purse.
- To understand types of Hat.
- To gain knowledge about watch designs.

ALLOCATION OF MARKS

Experiment	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

LIST OF EQUIPMENT

- Drawing table - 30 No

Materials required :

- Chart paper- A4 / A3 size - 30 No / experiment / batch of 30 students
- Drawing tools & colouring tools - 30 No / experiment / batch of 30 students
- Earring metal
- Bangle metal
- Silk thread
- Kundan material
- Quilling papers

LIST OF EXPRIEMENTS

1. Draw and design - any three types of Hand bag.
2. Draw and design - any two types of Hat.
3. Draw and design - Decorative bow and formal bow.
4. Draw and design - Belt for boy and girl.
5. Draw and design – any three types of Foot wear.
6. Draw and design - any two types of Purse and pouches.
7. Draw and design - any two types of Hair band and head bands.
8. Draw and design - any two types of Watches.
9. Prepare Earrings using silk thread.
10. Prepare Bangles using silk thread
11. Prepare Kundan jewellery.
12. Using quilling work prepare Earrings.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implements to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066410

Semester: IV Semester

Subject Title: APPAREL PRODUCTION PLANNING AND CONTROL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066410 Apparel Production Planning and Control	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Introduction	15
II	Apparel Engineering	15
III	Production Planning and Material Management	15
IV	Balance, MRP and Quick response	14
V	Industrial Engineering	14
	Test & Model Exam	7
Total		80

RATIONALE:

The planning of production process and productivity are the managerial point of view within the industry. Improving the productivity through proper production system increases the profit and performance level of the industry. This subject covers topic like Apparel engineering, Production planning, Materials management and Balancing, MRP and Quick response for better understanding of the subject.

OBJECTIVES:

At the end of the study of IV Semester the student will be able to

- To know about production control and systems.
- Understand the apparel business
- Study the merchandising activity
- Know the basic concepts of Apparel Engineering.
- Know about the production systems in apparel industry.
- Study the fundamentals of production planning.
- Understand the resource management in Apparel Industry
- Obtain knowledge on selection of raw material.
- Know the purchasing procedures
- Understand the basics of production balancing.
- Know about MRP and Sourcing strategies.
- Understand the IE concepts.
- Understand the SAM, Target fixing and Balancing of sewing machines.

4066410 APPAREL PRODUCTION PLANNING AND CONTROL
DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**INTRODUCTION** Production Control – Objectives – Relationship with functional areas of Manufacturing – elements of production control system- strategy for implementing a production control system- Business preplan – objectives- Merchandising preplanning- Basic strategy - Financial planning - Cash flow analysis - Production Preplanning.	**15**
II	**APPAREL ENGINEERING** Basic concept of Apparel engineering – Flexible Manufacturing – Throughput – Ergonomics - Work flow – Plant layout - Materials handling - Production systems – Progressive Bundle system - Unit Production system- Modular Production system – Individual finishing system – Group system – Combination of Production system – Mass production system – Lean production system – Comparison of lean and mass production system.	**15**
III	**PRODUCTION PLANNING AND MATERIAL MANAGEMENT** Production planning- Plant capacity- Committed Capacity- Available capacity- Potential capacity- Required capacity- Individual operation capacity- Excess capacity- Relationship of production Standards to capacity. Basic principles in material management – Principles of purchasing – Purchasing system based on Sales plan. Inventory control – Economic order quantity.	**15**
IV	**BALANCING, MRP AND QUICK RESPONSE** Introduction- Basics of Sectionalization – Basics of Balancing – Scheduling of machines- Theoretical Balancing- Balancing of work force- Principles of Manufacturing Resource Planning (MRP)- Critical assessment of MRP- Clothing industry experiences of MRP- Organizational strategies for Quick Response- Standardization affecting	**14**

	the materials supply chain- Buyer / Supplier relationship- Brief study of Sourcing strategies- Just in time suppliers- Overseas sourcing.	
V	**INDUSTRIAL ENGINEERING** Role IE in garment production management - Implementation procedure – Time study – Definition, Calculation of basic time, Calculation for standard time, Definition of SAM - SAM calculation through time study - Steps in production line setup – make operation breakdown - Define machine for each operation - Calculate production/Hour and no. of machine and Balancing of machine. Brief study sewing data analysis (SDA).	**14**

Text Book:

Title	Author	Publisher	Year
Introduction to Clothing Production Management	Chuter AJ	Blackwell Science	**1998**
Materials Management In Clothing Production	David J Taylor	BSP Professional Books London	**2001**

Reference:

Title	Author	Publisher	Year
Apparel manufacturing	Ruth E Glock Grace I Kunz	Prentice hall New Jersy	**1987**
Industrial Engineering in Apparel Production	Ramesh Babu V	Woodhead Publishing India	**2012**
Industrial Engineering and Management	N V S Raju	Cengage Learning	**2013**

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4061420

Semester: IV Semester

Subject Title: TECHNOLOGY OF FABRIC MANUFACTURE

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4061420 Technology of Fabric Manufacture	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Weaving Preparatory Process	15
II	Woven Fabric Formation	15
III	Knitted Fabric Formation	15
IV	Fabric Structures	14
V	Non Woven and Special Fabrics	14
	Test & Model Exam	7
Total		80

RATIONALE:

Fabric Formation is the second major process in Textile industry in which yarn is converted into fabric. So studying the different techniques of fabric formation like Weaving, Knitting and Non- Woven techniques are very important for a textile technician. Ability to analyze different types of woven and knitted fabric structures is also an essential skill.

OBJECTIVES:

At the end of the study of III Semester the student will be able to

- Study about the preparatory processes in weaving.
- Learn the different types of knotting equipment, Splicing and Autoconer.
- Know the primary and secondary motions of plain loom.
- Understand the features of different types of shuttle less looms.
- Understand the basic terminology & elements in knitting
- Know the basic principles & working of plain weft knitting machines.
- Know and analyze the different types of woven structure.
- Understand the defects in woven fabric.
- Know and analyze the different types of knit structure.
- Have knowledge on Non Woven, special fabrics and its applications.

4061420 TECHNOLOGY OF FABRIC MANUFACTURE

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**Weaving Preparatory Process :** Sequence of processes involved in Weaving preparatory with objectives- winding, warping, sizing - Passage of material in Autoconer- Features of Autoconer - Functions of Tensioners, Slub catchers, Electronic Clearers and Splicer – Comparison between Knotting and Splicing – Advantages of splicing. Passage of material in Beam warping - Object of Sectional Warping and its salient features - Passage of material in Sizing machine.	15
II	**Woven Fabric Formation** Looms – Types - Object of Drawing-in and Denting - Passage of Warp in a conventional Plain loom – Objects of Primary, Secondary & Auxiliary motions in a Plain loom - Features of Tappet, Dobby, Jacquard looms – Features of Automatic Shuttle Loom - Shuttleless looms Classification (Flexible Rapier, Projectile, Air jet and Water jet) and its advantages – Brief study of weft insertion techniques in shuttle less looms - Defects in Woven fabrics – Warp way defects – Weft way defects – Selvedge defects and Stains.	15
III	**Knitted Fabric Formation** Knitting – Definition, Classification – Uses- Comparison between knitting and weaving - Important Knitting terms - Course, Wales, Texture, Gauge, Loop length, Loop density, Face loop, Back loop- Knitting elements - Needles (Latch, Beard and Compound), Sinker, Cam- Passage of material in a Circular plain Weft knitting machine - Knitting cycle of Latch needle in plain weft knitting machine- Uses of Double Jersey, Flat and Warp knitted fabrics. Defects in Weft knit fabrics - Vertical lines, Horizontal lines, Drop stitches, Distorted stitches and Press off - Comparison between woven and knitted fabrics.	15

IV	**Fabric Structures** **Woven Structures:** Definition of Design, Draft, Peg plan – Design, Draft & Peg plan for Plain weave – 4x4 Matt weave – 2/1, 3/1 Twill weave – 5 end Satin weave and Sateen weave – End uses of above fabrics. **Knit Structures:** Knit, Tuck and Miss Stitches – Drawing of Graphical and Needle (Diagrammatic) notation of single jersey Plain, Purl and Rib. Drawing of Needle (Diagrammatic) notation of Interlock and Lacoste fabrics.	**14**
V	**Non Woven and Special Fabrics** Non-Woven fabrics – definition - uses - classification of Non Woven Fabrics. Web Formation Techniques – Staple Fibre Webs – Wet laid webs, Dry laid webs, Parallel, Cross and Random laid webs – Continuous Filament webs – Spun laid webs and Melt blown webs. Non Woven Fabric Formations Techniques – Adhesive bonding, Thermal Bonding, Needle punching and bonding of spun laid webs. Definition of Intelligent fabric, Smart fabric, Lace fabrics and Braided fabrics. Notes on Medical Textiles, Agricultural Textiles and Geo Textiles.	**14**

Title	**Author**	**Publisher**	**Year**
Text books:			
Principles of weaving	R Marks ATC Robinson	The Textile Institute, Manchester, UK	1976
The Motivate Series	Andrea Wynne	MacMillan Education Ltd, London and Basingstoke.	1997
Cotton Yarn Weaving	Kanungo R.N	Textile Association India, Ahmedabad	1980
Weaving machines, Mechanisms	M K Talukdar P K Sriramulu	Mahajan Publications Pvt Ltd, Ahmadabad-9	1998

&Management	D.B Ajgaonkar		
Modern Weaving Technology	J K Arora	Abhisek Publications, Chandigarh- 17	2008
Principles of Knitting	D B Ajgaonkar	Universal Publishing Corporation	1988
Knitting Technology	David J Spencer	Pergamon Press Oxford	1988
Reference books:			
Warp Knitting	D G B Thomas	Merro Pub. Co. ISA Buld. UK	1976
Textile Fibre to Fabric	Bernard P. Corbman	McGraw –Hill Book co.,Singapore.	1983
Yarns and Technical Textiles	K.P.Chellamani	SITRA, Coimbatore	1999
High speed Weaving	Jeyachandran.K	P.S.G.Tech,Coimbatore.	1990

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066430

Semester: IV Semester

Subject Title: CLOTHING MACHINERY AND EQUIPMENTS

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066430 Clothing Machinery and Equipments	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Basic Mechanical Engineering	15
II	Basic Sewing machines	15
III	Special machines	15
IV	Attachments and cutting machines	14
V	Fusing machines and Maintenance	14
	Test & Model Exam	7
Total		80

RATIONALE:

Machineries are the important section of garment construction. The quality of the product is determined to certain extent by the construction quality. Even the right kind of sewing machines and the attachments play a vital role in deciding the quality of the end product. To achieve the required quality, it is imperative to understand the type of sewing machines, its parts and functions, the maintenance part, the attachments along with various special machines that generally used in garment manufacturing.

OBJECTIVES:

At the end of the study of IV Semester the student will be able to

- Understand the functions of belts, gears, cams, clutch and bearings.
- Learn the various system of lubrication.
- Understand the basics of dc motor.
- Understand the functions of lock stitch, over lock and zig zag sewing machines.
- Learn the various defects in sewing.
- Learn about the Threading procedure of special machines.
- Understand the functions of special sewing machines.
- Learn the functions of guides and attachments.
- Understand the functions of finishing machines.
- Learn the maintenance of sewing and other machines.

4066430 CLOTHING MACHINERY AND EQUIPMENT

DETAILED SYLLABUS

Content: Theory

Unit	Name of the Topic	Hours
I	**BASIC MECHANICAL ENGINEERING** Transmission of Motion and Power: Types of belt drives and its advantages. Gear drive – Classification of Gear drives and its advantages. (Spur, Bevel, Helical and Worm Gear) Cams – definition – Types of Cams. Clutch – Functions of clutch – Principle and working of single plate friction Clutch with diagram. Brakes – Principle & working of Hydraulic Brake with diagram. Bearings – Type and importance. Lubrications – Purpose – types such as Liquid, Semi-liquid & Solid. Lubrication Systems – Gravity circulation System, Pressure circulating systems with diagram.	15
II	**BASIC SEWING MACHINES** Single needle Lock stitch machines - Parts and Functions - Timed sequence in stitch formation in single needle lock stitch machine - Needle bar mechanism with diagram - Brief study of Shuttle and Hook mechanism with diagram - Study of thread tension variation and its adjustment in needle and Bobbin - Different types of needles and Needle Number - Selection of needle and thread. Different types of sewing machine bed and its features.	15
III	**SPECIAL MACHINES** Merits of Computerized sewing machine - Different types of Feed mechanism in sewing machine. Threading Procedures with diagram - 3 threads over lock - Flat lock Machine (5 Thread). Brief Study of Button hole & Button Stitch Machines – Elastic tape Stitch Machine – Collar turner - Feed-Off-Arm machine – Chain Stitch Machine – Bar Tacking machine – Blind stitch Machine – Zig Zag machines – Computerized embroidery machine – Thread sucking machine - needle detector.	15

IV	**ATTACHMENTS AND CUTTING MACHINE** Brief study of Hemmer Foot, Cording Foot, Piping Foot, Quilter & Guide Foot with diagram. Brief study of special attachments and uses. Brief study of Folders, Binders & Guides. Objectives of Spreading – Requirements of Spreading table – Spreading types - Brief study of automatic spreading machine. Types of Cutting machines – Straight Knife, Band Knife, Round knife, Die Cutting and Laser Cutting. Brief study about Computerized cutting machine.	**14**
V	**FINISHING MACHINES & MAINTENANCE** Fusing – Elements of fusing - Types of Fusing machine and working of continuous fusing machine with diagram. Garment finishing – Process flow chart of garment finishing - Principles of Pressing – objective of pressing – Equipments for pressing - Spotting process – Universal finishers – Shirt finishers - form finishers - tunnel finishers - Garment folding machine. Maintenance of Machines – Maintenance Schedule in Garment Units.	**14**

Text Book:

Title	Author	Publisher	Year
Mechanical Technology	V Sivarajan	V K Pub. Bangalore	2002
Theory of Machines	S S Rattan	Tata Mc GRAW – Hill Pub. Co .Ltd. New Delhi-110033	1996
Text book of Electrical Technology	B L Theraja A K Theraja	S. Chand & Co. New Delhi	2002
Essentials of Electricity	K C Graham	D B Tarapore wala Mumbai	
Technology of Clothing Manufacture	Carr & Lathem	Blackwell Sci.Pub New 54ork	2014
Introduction to Clothing Manufacture	Gerry Cooklin	Blackwell Sci.Pub New 54ork	2015

Reference:

Title	Author	Publisher	Year
Theory of Machines	P L Ballaney	Kanna Pub., Delhi.	1980
Complete Guide to Sewing		Readers Digest.	1999
The complete book of sewing	Dorling Kindersley	London	1999
A Text book of Machine Design	R S Khurmi J K Gupta	Eurasia Pub., New Delhi	1998

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066440

Semester : IV Semester

Subject Title : PATTERN DRAFTING AND CONSTRUCTION - I

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066440 Pattern Drafting and Construction - I	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Pattern drafting of Infants wear	15
II	Pattern drafting of Frocks	15
III	Pattern drafting for Girls wear	15
IV	Pattern drafting for Boys wear	14
V	Pattern drafting for Ladies' wear	14
	Test & Model Exam	7
Total		80

RATIONALE:

Pattern drafting is the nerve centre of garment making. Every garment parts are draft to its size for lateral assembling into a garment. This procedure helps to make perfect garment to various sizes. Any alteration is also made within the pattern. The patterns can also be stored for ever and repeated orders are carried out at ease. From the patterns layout is made simple and better marker efficiency is achieved for minimum consumption of fabrics.

OBJECTIVES:

At the end of the study of IV Semester the student will be able to

- Understand the drafting procedure for infants' style.
- Learn the layout and construction procedure for infants' style.
- Understand the drafting procedure for frock styles.
- Learn the layout and construction procedure for frock styles.
- Understand the drafting procedure for girls' style.
- Learn the layout and construction procedure for girls' style.
- Understand the drafting procedure for boys' style.
- Learn the layout and construction procedure for boys' style.
- Understand the drafting procedure for ladies style.
- Learn the layout and construction procedure for ladies style.

4066440 PATTERN DRAFTING AND CONSTRUCTION- I

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**PATTERN DRAFTING OF INFANTS WEAR** Pattern making of Pilch Knicker, Zabala, Bloomers, Body suit (One-piece baby cloth) – with styles description – suitable fabrics - Layout, fabric consumption calculation and construction procedure.	**15**
II	**PATTERN DRAFTING OF FROCKS** Introduction to frocks - Pattern making of A line Frock, Yoke Frock, Umbrella Frock, Frock petticoat - with style description – suitable fabrics - Lay out, Fabric Consumption Calculation and Construction procedure.	**15**
III	**PATTERN DRAFTING FOR GIRLS WEAR** Pattern making of Pinafore, Skirt blouse, Plain blouse, Peddle Pusher - with style description- suitable fabrics – Lay out, Fabric Consumption Calculation and construction procedure.	**15**
IV	**PATTERN DRAFTING FOR BOYS WEAR** Pattern making for Boys shorts, Pyjama, T shirt, Plain shirt - with style description – suitable fabrics- Lay out, Fabric Consumption Calculation and Construction procedure.	**14**
V	**PATTERN DRAFTING FOR LADIES WEAR.** Pattern making of Modern Salwar, Chudidhar, Kameez, Ladies shirt - with style description – suitable fabrics - Lay out, Fabric Consumption Calculation and Construction procedure.	**14**

Text Book:

Title	Author	Publisher	Year
The Art Of Sewing	Anna Jacob Thomas.	Ubs Publishers, Delhi.	2001
Practical Clothing Constructions Part I & II	Mary Mathews	Paprinpack Printers,Chennai.	1985
Zarapkar System Of Cutting.	K.R.Zarapkar	Navneet Publications (I) Ltd.,Dantali. Gujarat.	2015

Reference:

Title	Author	Publisher	Year
Sew It Yourself.	Lippman (Gidon)	Prentice Hall Inc New Jersey	2002
Metric Pattern Cutting For Children‘s Wear	Winfred Aldrich	Blackwell science	1991
Pattern Design For Children’s Clothes	Gloria Mortimer-Dunn	BT Batsford Ltd,London	1996
Clothing For Moderns	Erwine	Macmillan Pub.Co., New York.	1992
Comparative Clothing Construction Techniques	Virginn Stolpe Lewis	Surjeetpublications Delhi.	2015
Scientific Garments Cutting	K.M.Hegde	K.M.Hegde & Sons, Poona	1989
Art In Everyday Life	Harriet Goldstein Vetta Goldstein	Oxford & IBH Publishing	1982

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066450

Semester: IV Semester

Subject Title: PATTERN DRAFTING - IPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066450 Pattern drafting – I Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Garment production starts with drafting of patterns of various parts of the garment. This technique helps the manufacturers in assembling the parts perfectly in the next process. Further it assists to calculate the requirement of fabric for garment construction and subsequently reduced fabric consumption and increased profits. This practical subject provides hands on experience on the method of drafting every part of garment like front, back, yoke, collar, cuff, skirt panels etc., for various styles.

GUIDELINES:

- All the sixteen experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every student should be provided with a separate drafting table and drafting tools for creating patterns of various parts in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Pattern preparation	60 marks
Drafting procedure	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES OF THE EXPERIMENTS:

Infants' wears

- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment - Pilch Knicker
- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment - Zabala
- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment – Bloomer

Frock styles

- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment –- A line Chemise
- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment -Yoke Frock
- To prepare the paper pattern and calculate fabric consumption by using layout method for the Garment -Umbrella Frock
- To prepare the paper pattern for the Garment – Pinna fore
- To prepare the paper pattern for the Garment – Peddle Pusher

Boys' wears.

- To prepare the paper pattern for the Garment – Shorts
- To prepare the paper pattern for the Garment – Pyjama
- To prepare the paper pattern for the Garment – T- Shirt.

Ladies' wears.

- To prepare the paper pattern for the Garment – Salwar
- To prepare the paper pattern for the Garment – Kameez

LIST OF EQUIPMENT

Equipment required:

- Pattern table- 8'x4' table- 4 nos.

Materials required:

- Pattern paper-30 nos/experiment /batch of 30 students
- Measuring, drafting & general tools-30/ batch of 30 students

LIST OF EXPRIMENT

1. Prepare the paper pattern and calculate fabric consumption for the Garment – Piltch nicker.
2. Prepare the paper pattern and calculate fabric consumption for the Garment – Zabla.
3. Prepare the paper pattern and calculate fabric consumption for the Garment – Bloomer.
4. Prepare the paper pattern and calculate fabric consumption for the Garment – A Line frock.
5. Prepare the paper pattern and calculate fabric consumption for the Garment – Yoke Frock.
6. Prepare the paper pattern for the Garment – Umbrella Frock.
7. Prepare the paper pattern for the Garment – Pinna fore.
8. Prepare the paper pattern for the Garment – T shirt.
9. Prepare the paper pattern for the Garment – Boys Shorts.
10. Prepare the paper pattern for the Garment – Pyjama.
11. Prepare the paper pattern for the Garment – Modern Salwar.
12. Prepare the paper pattern for the Garment – Kameez.

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STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066460

Semester: IV Semester

Subject Title: GARMENT CONSTRUCTION - IPRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066460 Garment Construction – I Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Garment construction is the assembling of parts of the garment. It is an art of making the garment. Various stitches, seams and accessories are used in the conversion of the individual parts into a final garment. This practical subject provides hands on experience on the method of constructing each and every part of the garment into a final assembled product.

GUIDELINES:

- All the sixteen experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machine with attachments for creating garments in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Garment Construction	60 marks
Layout & Construction Procedure	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES OF THE EXPERIMENTS:

Infants' wears:

- Laying and Cutting of parts of Pilch Kincker, Zabla and Bloomer on fabric.
- Stitching of various parts of Pilch Kincker, Zabla and Bloomer.
- Finishing the Pilch Kincker, Zabla and Bloomer.

Frock style:

- Laying and Cutting of parts of A line frock, Yoke frock, Umbrella frock, Pinnafore and Peddle Pusher on fabric.
- Stitching of various parts of A line frock, Yoke frock, Umbrella frock, Pinnafore and Peddle Pusher
- Finishing the A line frock, Yoke frock, Umbrella frock, Pinnafore and Peddle Pusher.

Boys' wears:

- Laying and Cutting of parts of Shirt, Shorts, Pyjama and T Shirt.
- Stitching of various parts of Shirt, Shorts, Pyjama and T Shirt.

- Finishing the Shirt, Shorts, Pyjama and T Shirt.

Ladies' wears:

- Laying and Cutting of parts of Salwar and Kameez.
- Stitching of various parts of Salwar and Kameez.
- Finishing the Salwar and Kameez.

LIST OF EQUIPMENT

Equipment / Machines required:

Sewing machines-

- Lock stitch- 15 m/cs.
- Over lock- 2 m/cs
- Flat lock- 1 m/c
- Button hole- 1 m/c
- Button stitch- 1 m/c
- 4- Needle trimmer*- 1 m/c
- Chain stitch*- 1 m/c
- Feed- off-arm* - 1 m/c
- Iron press- 1m/c

*Optional

Material required:

- 1.5 – 2 meters of fabric/ expt. / batch of 30 students.
- Sewing threads- white, assorted
- Decorative materials

LIST OF EXPREIMENTS

1. Using the paper pattern cut, stitch and finish the Garment - Pilch Knicker.
2. Using the paper pattern cut, stitch and finish the Garment – Zabala.
3. Using the paper pattern cut, stitch and finish the Garment – Bloomer.
4. Using the paper pattern cut, stitch and finish the Garment – A Line frock.
5. Using the paper pattern cut, stitch and finish the Garment – Yoke Frock.
6. Using the paper pattern cut, stitch and finish the Garment - Umbrella Frock.

7. Using the paper pattern cut, stitch and finish the Garment – Pinna fore.
8. Using the paper pattern cut, stitch and finish the Garment – T shirt.
9. Using the paper pattern cut, stitch and finish the Garment – Boys Shorts.
10. Using the paper pattern cut, stitch and finish the Garment – Pyjama.
11. Using the paper pattern cut, stitch and finish the Garment – Salwar.
12. Using the paper pattern cut, stitch and finish the Garment – Kameez.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066470

Semester: IV Semester

Subject Title: HOME TEXTILES PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066470 Home Textiles Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Style of Home Textiles products and its various design techniques. The Home textile products construction includes various types of Pillow cover, curtains, Mattress, Blankets and with some Structural effect. This practical subject provides hands on experience on the preparation of the above products with decorative material& accessories.

GUIDELINES:

- All the sixteen experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machines and required attachments for exposing the skills in the laboratory.
- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Experiment	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

EXPERIMENTS OBJECTIVES:

Pillow cover& Cushion cover

- To Construct different types of Pillow cover – any two.
- To Construct different types of Cushion cover
- To Construct different types of Cushion cover with Frills.

Quilt cover & Bed spread

- To Construct different types of Quilt cover.
- To Construct Bed spread with decorative details& embroidery.

Kitchen

- To Construct Apron, Mitten, Table cover, Tea cozy cover, pot cover and Napkins.

Window

- To construct window curtains and hangers.

Furniture covers

- To construct chair cover, sofa cover and pelmets

LIST OF EQUIPMENT

Equipment required:

- Measuring tools
- Pattern making tools
- Construction tools
- General tools
- Sewing machines: - Lock stitch- 15 m/cs.
  Over lock- 1 m/c.
  Flat lock- 1 m/c
  Button hole- 1 m/c
  Button stitch- 1 m/c

Materials required:

- 3- 5 meters of fabric/ expt./ batch of 30 students.
- Sewing threads: - white and assorted – 30 nos.

List of experiments.

1. Cut, stitch and finish any two types of pillow covers.
2. Cut, stitch and finish round cushion cover.
3. Cut, stitch and finish square cushion covers with frills.
4. Cut, stitch and finish Quilt cover.
5. Cut, stitch and finish Bed sheet.
6. Cut, stitch and finish Apron.
7. Cut, stitch and finish Mitten.
8. Cut, stitch and finish Table cover.
9. Cut, stitch and finish Tea cozy.
10. Cut, stitch and finish any two types of Window curtain.
11. Cut, stitch and finish Sofa cover.
12. Cut, stitch and finish Pelmets.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066510

Semester: V Semester

Subject Title: CHEMICAL PROCESSING AND TESTING OF TEXTILES

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066510 Chemical Processing and Testing of Textiles	**5**	**80**	**25**	**100***	**100**	**3 Hrs**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Preparatory Process in Wet Processing	15
II	Dyeing of Textiles	15
III	Printing of Textiles	15
IV	Finishing of Textiles	14
V	Testing of Yarns and Fabrics	14
	Test & Model Exam	7
Total		80

RATIONALE:

The introduction to chemical Processing includes the de-sizing, scouring, bleaching is the Preparatory process to any kind of Textiles. The Dyeing of different fabrics with the suitable dyes and dyeing techniques are included to understand the wet processing treatment carried out for Textiles coloration. The Printing of Textiles covers various printing method to produce various surface effects on fabric. The finishing is to produce required properties and end usage. The Testing part of this section provides a basic knowledge on the Testing methods of different types of yarn and fabric.

OBJECTIVES:

At the end of the study of V Semester the student will be able to

- To understand the basics of wet processing sequence.
- To study the singeing, scouring, desizing & bleaching processes.
- To learn the classifications of dyes.
- To understand the various dyeing techniques.
- To understand the methods of printing.
- To study the various printing techniques.
- To know about finishing processes.
- To learn different types of finishing methods in detail.
- To understand the basics of numbering systems.
- To learn yarn and fabric testing procedures.

4066510 CHEMICAL PROCESSING AND TESTING OF TEXTILES
DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**PREPARATORY PROCESS IN WET PROCESSING** Sequence of process used in wet processing– Object of Singeing – Gas singeing Machine. Objects of de-sizing – Enzyme De-sizing. Scouring – objects - Scouring of cotton fabric uses Kiers - Merits of Continuous de-sizing and Scouring. Bleaching – objects of bleaching – Conventional bleaching process (using hypo chloride). Continuous method of scouring and bleaching using Hydrogen peroxide in J Box with line diagram – Comparison of woven and knitted cloth processing.	**15**
II	**DYEING OF TEXTILES** Dyes used for natural, Manmade and synthetic fibres – Dyeing of cellulosic fibre with Vat, Reactive dyes using Jigger – Dyeing of knitted fabric with reactive dyes using soft flow machine – Dyeing method of protein fibre with acid dyes – Dyeing of polyester with disperse dyes – HTHP Beam dyeing machine. Garment Dyeing – Sancowad process, Rotary dyeing, , Denim Processing	**15**
III	**PRINTING OF TEXTILES** Comparison between dyeing and printing - Styles and methods of printing. Direct style of printing with pigments on cotton - Direct style of Printing with reactive dyes on cotton - Direct style of printing with Disperse dyes on polyester - Brief style of Batik style, tie & dye, and Ikkat on cotton. Steps in Screen preparation – Brief study of printing techniques such as Flat bed, Rotary, Digital ink jet printing - Curing machine – steamer.	**15**
IV	**FINISHING OF TEXTILES** Mercerization – Objects of mercerization – Mercerization of cotton fabric using chainless machine – Sanforisation process – Objects of Compacting and Calendaring. Finishing – Type of finishes (Functional	**14**

	and Novelty finish), Finishing procedure and Chemicals - Silicone finish, Marble (Acid) finish, Stone wash, Water repellent and Water resistance finish, Flame retardant and Anti-microbial finish.	
	TESTING OF YARNS AND FABRICS Definition of yarn count – Definition of English and Tex system of yarn numbering - Method of count determination by Beesley balance – Yarn strength by Lea tester – Yarn Twist – Double yarn twist Estimation – Yarn Appearance test as per ASTM standards. Fabrics – Tensile, Tear, Bursting strength – Abrasion Testing by Martindale abrasion tester. Testing of fastness – Wash, light, rub fastness for garments. Definition of Fabric Air Permeability and Fabric Air Resistance and its importance.	**14**

Text Book :

Title	Author	Publisher	Year
The Bleaching Dying of Cotton material.	Prayog R S	Weaver's service centre, Mumbai	2000
Technology of Textile Printing	Prayog R S	-do-	1998
Principles of Textile Testing	J.E. BOOTH	Butterworth Scientific, London	1999

Reference:

Title	Author	Publisher	Year
Tech. of Textile Processing all series	SHENAI.V.A.	Shevak Publications Bombay	1999
Mercerising	MARSH.J.T.	BT Publications, Mumbai	1979

An Introduction to Textile finishing	MARSH.J.T.	-do-	1979
Textile Printing	MILLER.W.C	Society of Dyers	1994

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066520

Semester: V Semester

Subject Title: PATTERN DRAFTING AND CONSTRUCTION - II

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066520 Pattern Drafting and Construction - II	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Pattern drafting of Men's Wear - I	15
II	Pattern drafting of Men's Wear - II	15
III	Pattern drafting of Ladies Wear - I	15
IV	Pattern drafting of Ladies Wear - I	14
V	Pattern grading, Fitting and Alteration	14
	Test & Model Exam	7
Total		80

RATIONALE:

Pattern drafting is the nerve centre of garment making. Every garment parts are draft to its size for lateral assembling into a garment. This procedure helps to make perfect garment to various sizes. Any alteration is also made within the pattern. The patterns can also be stored for ever and repeated orders are carried out at ease. From the pattern's layout is made simple and better marker efficiency is achieved for minimum consumption of fabrics. This part of the subject deals with the complex styles of garments, their pattern drafting, laying & construction.

OBJECTIVES:

At the end of the study of V Semester the student will be able to

- Understand the drafting procedure for ladies' style.
- Learn the layout and construction procedure for ladies' style.
- Understand the drafting procedure for men's style.
- Learn the layout and construction procedure for men's style.
- Learn about pattern grading, fitting and pattern alterations.

4066520 PATTERN DRAFTING AND CONSTRUCTION- II

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**PATTERN DRAFTING FOR MEN'S WEAR I** Pattern drafting procedure of Full sleeve shirt - Pleated trousers - Jeans - Nehru's Kurtha with Chinese mandarin collar – Pattern layout - Calculation of material consumption - Construction procedure	15
II	**PATTERN DRAFTING FOR MEN'S WEAR II** Pattern drafting procedure of SB Waist Coat - Jodhpur Coat - Safari shirt – Dressing Gown - Pattern layout - Calculation of material consumption – Construction procedure.	15
III	**PATTERN DRAFTING FOR LADIES WEAR I** Pattern drafting procedure of 6 panels Sari petticoat – Flared pants – Katori choli - Straight jacket with front open and Leg-o-mutton sleeve- Pattern layout - Calculation of material consumption - Construction procedure.	15
IV	**PATTERN DRAFTING FOR LADIES WEAR II** Pattern drafting procedure of House coat with Front full opening and open collar – Cape - Full Maxi with Magyar sleeve – Culottes (Divided skirt) - Pattern layout - Calculation of material consumption - Construction procedure.	14
V	**PATTERN GRADING, FITTING& ALTERATIONS** Define pattern grading - Pattern grading procedure for bodice front, back & sleeve - Variables for fitting - Importance of altering patterns - General principles for pattern alteration - Study of fitting problems and alterations in the following parts - Bust line - Neckline - Shoulder line - Armhole - Bodice back – Sleeves - Study of fitting problems and alterations in Trousers. Brief study of CAD software for pattern drafting and grading & its importance.	14

Text Book:

Title	Author	Publisher	Year
The Art Of Sewing	Anna Jacob Thomas.	Ubs Publishers, Delhi.	2001
Practical Clothing Constructions Part I & II	Mary Mathews	Paprinpack Printers,Chennai.	1982
Zarapkar System Of Cutting.	K.R.Zarapkar	Navneet Publications (I) Ltd.,Dantali. Gujarat.	2005
Sew it Yourself	Lippman (Gidon)	Prentice Hall Inc New Jersey	2002

Reference:

Comparative Clothing Construction Techniques	Virginn Stolpe Lewis	Surjeet Publications, Delhi	1985
Scientific Garments Cutting	K.M. Hedge	K.M. Hedge & Sons., Poona	1998
Pattern Cutting For Women's Outer Wear	Gerry Cooklin	Blackwell Science Publication, London	2001
Metric Pattern Cutting	Winfred Aldrich	Blackwell Science Publication, London	2003
Metric Pattern Cutting For Children 's Wear	Winfred Aldrich	Blackwell Science Publication, London	2004
Pattern grading for Mens' Clothes	Gerry Cooklin	Blackwell Science Publication, London	2000
Pattern grading for Children's Clothes	Gerry Cooklin	Blackwell Science Publication, London	1991
Pattern Grading for womens' Clothiing	Gerry Cooklin	Blackwell Science Publication, London	2004
Step by Step Dress Making course	Leela Aitken	BBC Books, London	1992

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066531

Semester: V Semester

Subject Title: APPAREL MERCHANDISING

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066531 Apparel Merchandising	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

Unit	Topics	Hours
I	Introduction to Merchandising	15
II	Merchandise Planning	15
III	Retail & Visual Merchandising	15
IV	Garment Costing	14
V	Marketing Techniques & sales promotion	14
	Test & Model Exam	7
Total		80

RATIONALE:

Apparel merchandising is the common word prevailing in the Garment Industry. Every export unit is having merchandising wing. The officials in this wing are responsible for the execution of orders right from receiving orders to dispatching of goods. This subject gives an in-depth knowledge on various type of merchandising, the planning, the nature of work of a merchandiser along with the marketing techniques and sale promotion activities.

OBJECTIVES:

At the end of the study of V Semester the student will be able to

- Understand the merchandising procedures.
- Learn the functions of merchandiser.
- Understand the retail merchandising procedures.
- Learn the prizing procedures.
- Understand the visual merchandising procedures.
- Learn the trends in visual merchandising.
- Understand the merchandising plan.
- Learn to prepare merchandising calendar and activities.
- Learn the marketing techniques.
- Understand the advertising techniques.
- Learn the sales promotion techniques.

4066531 APPAREL MERCHANDISING
DETAILED SYLLABUS

Content: Theory

Unit	Name of the Topic	Hours
I	**INTRODUCTION TO MERCHANDISING** Terminology in merchandising - Customer, Consumer, Buyer, Importer, Retailer, Exporter and Trader. Season of export – Spring, Summer, Winter & Autumn. Types of Buyer and buying offices. Merchandising – Definition – Process flow of merchandising – Role of merchandiser – Skills of Merchandiser. Sampling – Types of samples - Development sample, Salesman sample, Approval sample, Preproduction sample, Production sample, Shipment sample. Brief study of Garment export procedure - Specification file – BOM sheet – order confirmation – purchase order – PP Meeting – Compliance.	**15**
II	**MERCHANDISE PLANNING** Merchandising plan – Planning sales goals – Buying plan – Assortment Planning – Open to buy – Purpose of a six months plan, Elements of a six-month plan – Analysis of previous merchandising plan and developing a new plan - Planning components - Merchandising calendar and scheduling. Direct order - Merchant order - CMT order - Vendor and sub-contractor - Requirement of a purchase order - Buyer seller meets.	**15**
III	**RETAIL & VISUAL MERCHANDISING** Introduction to Retail Merchandising – Types of retail merchandising - Department stores – Discounters – Off-price retailers – Outlet source – Close out - Warehouse clubs – Non-store retailing – Mail order Merchants – E Tailing. Definition of Visual Merchandising – Elements of Visual Merchandising - Signage, Marquee, Entries, window display, Lighting & Awnings – Brief study of boutique. Principles of Displays – Responsibility in visual merchandiser – Methods of display – Problems in display.	**15**

IV	**GARMENT COSTING** Components of costing – Prime cost – Over heads – Total cost. Garment Costing – Fabric consumption – Sewing thread consumption - CMT charges for various styles – Costing of woven garment full Sleeve shirt and Trouser– Costing of Knitted garment - T shirt, night gown. Retail pricing – Mark up – Price point – Markdown – Promotional pricing – Deceptive pricing.	**14**
V	**MARKETING TECHNIQUES & SALES PROMOTION** Marketing – Definition - Principles – Objectives – Strategies - Brief study of E-marketing. Advertisement Techniques – Broadcast Advertising – Radio advertising – Television Advertising – Magazines – Out-of-home advertising - Advertisement effectiveness. Consumer behavior in fashion - Sales promotion approaches & effectiveness - Distribution channels.	**14**

Text Book:

Title	Author	Publisher	Year
Marketing Management	Philip . Kotler Kevin Lane Keller	Prentice Hall	2006
Fashion Marketing & Merchandising	Manmeet Sodhia	Kalyani Publishers	
Fashion buying & Merchandising Management	Tim Jackson & David Shaw	Palgrave Master Series	2001
Apparel Manufacturing	Ruth E. Glock Grace I. Kunz	A Simson & Schuster company, Singapore	1995

Reference:

Title	Author	Publisher	Year
Export management	Balagopal.T.A.S	Himalaya Publishing House, Bombay.	1984
Inside the fashion business	Kitty G. Dicerson	Dorling Kindesley(India) Pvt Ltd., New Delhi	2007
Fashion Retailing	Ellen Diamond	Dorling Kindesley(India) Pvt Ltd., New Delhi	2007
Foundations of advertising Theory & Practice	Chunnawala Sethia	Himalaya Publishing House, Bombay	1985
Retail Merchandising	Ernest H Rich	Merrill Publishing company	
Fashion Sales Promotion	Pamela M.Phillips	A Simson & Schuster company , New Jersy	1985
Fashion Marketing	Mike Easey	Blackwell Publishing	2005
Fashion Marketing	Hines & Bruce	Butter worth - Heinemann	2006
Merchandise Buying and Management	Donnellecen John	Fairchild Publication Inc., NY	1999

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066532

Semester: V Semester

Subject Title: INDIAN AND WESTERN COSTUMES

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066532 Indian and western Costumes	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

S. No	Topics	Hours
I	Introduction to Costumes	15
II	Costumes of Ancient world	15
III	Costumes of Western countries	15
IV	Traditional costumes of India	14
V	Costumes of Modern world	14
	Test & Revision	7
Total		80

RATIONALE:

Fashion begins with historic costumes. In other words it cycles around. All the designers still create designs through inspirations derived from historic costumes. such a vast complex styles of garments exists in this field and one should know in details the costumes of India and Western part of the world to become master of fashion. This subject provides rich knowledge about various costumes of the world.

OBJECTIVES:

At the end of the study of V Semester the student will be able to

- Study about the origin & need of clothing.
- Study about the factors influence the costume changes in ancient period.
- Study about the costumes of pre-historic period.
- Study about the ancient western costumes.
- Know about the history of Indian costumes
- Study about the traditional costumes & prints of India.
- Study about the costume changes of modern world.
- Study about the different types of costumes for various purposes.

4066532 INDIAN AND WESTERN COSTUMES

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**INTRODUCTION TO COSTUMES** Origin of clothing –dress out of painting, cutting and other methods- Growth of dress, Need for clothing- factors influencing costume changes- role of costumes as a status symbol, sex appeal, fashion and seasons.	15
II	**COSTUMES OF ANCIENT WORLD** Pre-historic period**-** discussions on costumes- Sumerian costumes- Cloak- Kaunakas- outer garments- Roman costumes- Tunic- Toga- Stola- Palla- Byzantine costumes- Cloaks- Hose- Pallium- Brief study of costumes on Socio-political and economic point of view- study on colour combinations- view on society reflections.	15
III	**COSTUMES OF WESTERN COUNTRIES** Costumes of Ancient Western Civilization – Egypt, Roman, English, French empires during Renaissance 1500 – 1600 A.D. Jewellery of the period – color combination- Materials – Accessories. Brief study of costumes on Socio-political and economic point of view.	15
IV	**TRADITIONAL COSTUMES OF INDIA** Costumes of India, History of Indian Costumes up to Mughal Period, Traditional Costumes of different states in India. Accessories and Garments used in India. Study of Dacca Muslin,Jandhani, Himrus & Amrus Carpets, Kashmir Shawls, Kanchipuram & Baluchari Sarees, Paithani sarees, Bandhani, Patola, Ikat, Kalamkari and other styles of Printing & Dyeing Textiles.	14
V	**COSTUMES OF MODERN WORLD** Costumes of 20th century-factors influencing on costume changes – Study on Business Wears- Evening dress- Sleep wear- Religious wear- Seasonal wear - Specialized wears- Bridal wear – Sportswear- Industrial	14

	wear- Party wear- Brief study of costumes on Socio-political and economic point of view- study on colour combinations.	

Text Book:

Title	Author	Publisher	Year
Historic Costumes	Lester K.I.	Chas A Bennet & Co	**1991**
Costume & Fashion	Laver J	Thames & Hudson	**1997**
Costume & Fashion	Jack Cassin - Scott	Brockhampton press, London	**1999**
Costumes of India & Pakistan	Das S N		**1984**
Indian Costume	G.S Ghurye	Popular Prakasham	**1987**
History of Fashion	Garland		**2001**

Reference:

Title	Author	Publisher	Year
The encyclopaedia of Fashion	Georgina 'O' Hara		**2002**
Fashion in western world	Yarwood Doreep		**2002**
Costume, Textiles and Jewellery of India	Vandana Bhenderi	Prakash Books, New Delhi, 2004.	

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066540

Semester: V Semester

Subject Title: CHEMICAL PROCESSING AND TESTING OF TEXTILES PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066540 Chemical Processing and Testing of Textiles Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

All garments before and after production under goes many type of testing for fibre, yarn, fabric and garment properties. The passing of exports and repeat orders are achieved by maintain the required quality of garments. This subject deals with the testing of above said properties, the procedures adopted in the testing laboratories, the analysis of the structure of the fabric, the analysis of the result and determination of quality of fibre, yarn, fabric and garments.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.
- In order to develop best skills every student should be provided with a separate drafting table and drafting tools for creating patterns of various parts in the laboratory.
- The external examiners are requested to ensure that a single experimental question should not be given to more than three students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Experiment	50 marks
Write up	20 marks
Viva	05 marks
Total	75 Marks

OBJECTIVES:

Wet Processing

- To learn Desizing, Scouring & Bleaching of fabrics.
- To practice dyeing of Reactive, Acid, Disperse dyes on relevant fabrics.
- To learn different Printing techniques on fabrics using Reactive and Pigment dyes.

Textile Testing

- Lea strength of yarn
- Count Strength product.
- Twist per Inch of Single yarn

- Tensile strength of fabric.
- Tearing strength of fabric
- Bursting strength of the fabric.
- To calculate the coefficient of variation of test results.

LIST OF EQUIPMENT

Equipment / Machines / Instruments required:

Wet processing

- Beaker- 30 N0s.
- Glass rod- 30 N0s.
- Steel tumbler- 30 N0s.
- Dye bath (6 tumbler/ Bath) - 30 N0s.
- Physical balance- 1 No
- Electronic balance*- 1 No
- Burners 5 Nos.
- HTHP dyeing machine- 1 No
- Screens- 5 Nos.
- Squeezer 5 Nos.
- Printing table 1 No
- Padding mangles* 1 No
- Crock meter 1 No
- Tensile strength tester- fabric 1 No
- Tearing strength tester 1 No
- Bursting strength tester 1 No
- Yarn Lea strength tester 1 No
- Twist tester- single yarn 1 No
- Beesley balance 1 No
- Wrap reel 1 No
- Counting glass 30 Nos

*** Optional**

Material required :

2-3 meters of fabric/ experiment / batch of 30 students.

LIST OF EXPREIMENTS

1. De-size the given woven fabric.
2. Scour the given woven fabric.
3. Bleach the given cotton fabrics with Hydrogen peroxide.
4. Dye the given Cellulosic fabric with Reactive dyes.
5. Dye the given Polyester fabric with Disperse dyes.
6. Dye the given Protein fabric with Acid dyes.
7. Print the given cotton fabrics with Reactive dyes.
8. Determine the Lea strength of yarn using Lea tester and calculate the Count Strength product.
9. Determine the Twist per Inch of Double yarn using Twist tester.
10. Determine the Tensile strength of fabric using Tensile strength tester.
11. Determine the Tearing strength of fabric using Tearing strength tester.
12. Determine the Bursting strength of the fabric using Bursting tester.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066550

Semester: V Semester

Subject Title: PATTERN DRAFTING - II PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066550 Pattern Drafting - II Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Garment production starts with drafting of patterns of various parts of the garment. This technique helps the manufacturers in assembling the parts perfectly in the next process. Further it assists to calculate the requirement of fabric for garment construction and subsequently reduced fabric consumption and increased profits. This practical subject provides hands on experience on the method of drafting every part of complex styled garments with variety of front, back, yoke, collar, cuff, skirt panels etc.

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every student should be provided with a separate drafting table and drafting tools for creating patterns of various parts in the laboratory.
- The external examiners are requested to ensure that a single experimental question should not be given to more than three students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Pattern preparation	60 marks
Drafting procedure	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES:

Gents' wears.

- To prepare the paper pattern for the Garment – Full sleeve shirt
- To prepare the paper pattern for the Garment – Pleated trouser
- To prepare the paper pattern for the Garment – SB Waist coat
- To prepare the paper pattern for the Garment – Jodhpur coat
- To prepare the paper pattern for the Garment – Nehru's Kurta with Chinese mandarin collar
- To prepare the paper pattern for the Garment – Dressing Gown

Ladies' wears.

- To prepare the paper pattern for the Garment – Sari petti-coat - 6 panels
- To prepare the paper pattern for the Garment – House -Front full opening
- To prepare the paper pattern for the Garment - Maxi with Peter Pan collar, Puff sleeve & Frilled skirt
- To prepare the paper pattern for the Garment - Flared Pant
- To prepare the paper pattern for the Garment –Straight Jacket
- To prepare the paper pattern for the Garment –Culottes

LIST OF EQUIPMENT

Equipment required:

- Pattern table- 8'x4' table- 4 nos.

Materials required:

- Pattern paper-30 nos. /expt /batch of 30 students
- Measuring, drafting & general tools-30/ batch of 30 students

LIST OF EXPREIMENTS

1. Prepare the paper pattern for the Garment – Full sleeve shirt.
2. Prepare the paper pattern for the Garment – Pleated Trousers.
3. Prepare the paper pattern for the Garment – Nehru Kurtha.
4. Prepare the paper pattern for the Garment – SB Waist coat.
5. Prepare the paper pattern for the Garment – Jodhpur coat.
6. Prepare the paper pattern for the Garment – Dressing Gown.
7. Prepare the paper pattern for the Garment – 6 Panel petticoats.
8. Prepare the paper pattern for the Garment – Straight Jacket.
9. Prepare the paper pattern for the Garment – Flared pants.
10. Prepare the paper pattern for the Garment – House coat.
11. Prepare the paper pattern for the Garment – Full Maxi.
12. Prepare the paper pattern for the Garment – Culottes.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066560

Semester: V Semester

Subject Title: GARMENT CONSTRUCTION - II PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066560 Garment Construction - II Practical	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Garment construction is the assembling of parts of the garment. It is an art of making the garment. Various stitches, seams and accessories are used in the conversion of the individual parts into a final garment. This practical subject provides hands on experience on the method of constructing each and every part of the complex natured styles of garment into a final assembled product.

GUIDELINES:

- All the sixteen experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machine with attachments for creating garments in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Garment construction	60 marks
Layout & construction procedure	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES:

Ladies' wears:

- Cutting of parts of Party dress- Frock with Peter Pan collar Puff sleeve & frilled skirt- Flared pant - Divided skirt – straight jacket – House coat
- Stitching of various parts of Party dress- Frock with Peter Pan collar Puff sleeve & frilled skirt- Flared pant - Divided skirt – straight jacket – House coat -
- Finishing the Party dress-Frock with Peter Pan collar Puff sleeve & frilled skirt- Flared pant - Divided skirt – straight jacket – House coat
- Cutting of parts of Sari petticoat - 6 panels.
- Stitching of various parts of Sari petticoat –6 panels
- Finishing the Sari petticoat - 6 panels.

Gents' wears:

- Cutting of parts of Full sleeve shirt -Pleated trousers- Nehru kurdha SB Waist coat - Jodhpur coat -Dressing Gown
- Stitching of various parts of Full sleeve shirt -Pleated trousers- Nehru kurdha SB Waist coat - Jodhpur coat -Dressing Gown
- Finishing the Full sleeve shirt -Pleated trousers- Nehru kurdha SB Waist coat - Jodhpur coat -Dressing Gown

LIST OF EQUIPMENT

Equipment / Machines required:

Sewing machines-

- Lock stitch- 15 m/cs.
- Over lock- 2 m/cs
- Flat lock- 1 m/c
- Button hole- 1 m/c
- Button stitch- 1 m/c
- 4- Needle trimmer*- 1 m/c
- Chain stitch*- 1 m/c
- Feed- off-arm* - 1 m/c
- Iron press- 1m/c

*Optional

Material required:

- 1.5 – 2 meters of fabric/ expt. / batch of 30 students.
- Sewing threads- white, assorted
- Decorative materials

LIST OF EXPREIMENTS

1. Using the paper pattern cut, stitch and finish the Garment – Full sleeve shirt.
2. Using the paper pattern cut, stitch and finish the Garment – Pleated Trousers.
3. Using the paper pattern cut, stitch and finish the Garment – Nehru Kurtha.
4. Using the paper pattern cut, stitch and finish the Garment – SB Waist coat.
5. Using the paper pattern cut, stitch and finish the Garment – Jodhpur coat.
6. Using the paper pattern cut, stitch and finish the Garment – Dressing Gown.
7. Using the paper pattern cut, stitch and finish the Garment – 6 Panel petticoats.
8. Using the paper pattern cut, stitch and finish the Garment – Straight Jacket.
9. Using the paper pattern cut, stitch and finish the Garment – Flared pants.
10. Using the paper pattern cut, stitch and finish the Garment – House coat.
11. Using the paper pattern cut, stitch and finish the Garment – Full Maxi.
12. Using the paper pattern cut, stitch and finish the Garment – Culottes.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066570

Semester: V Semester

Subject Title: ENTREPRENEURSHIP AND STARTUPS PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066570 Entrepreneurship and Start-up Practical	**4**	**64**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours

UNIT	Topic	Hours
I	Entrepreneurship – Introduction and Process	12
II	Business Idea and Banking	12
III	Startups, E-cell and Success Stories	12
IV	Pricing and Cost Analysis	12
V	Business Plan Preparation	12
Test & Model Exam		4
Total		64

RATIONALE:

Development of a diploma curriculum is a dynamic process responsive to the society and reflecting the needs and aspiration of its learners. Fast changing society deserves changes in educational curriculum particularly to establish relevance to emerging socio-economic environments; to ensure equity of opportunity and participation and finally promoting concern for excellence. In this context the course on entrepreneurship and startups aims at instilling and stimulating human urge for excellence by realizing individual potential for generating and putting to use the inputs, relevant to social prosperity and thereby ensure good means of living for every individual, provides jobs and develop Indian economy.

OBJECTIVE:

At the end of the study of 5th semester the students will be able to

- To excite the students about entrepreneurship
- Acquiring Entrepreneurial spirit and resourcefulness
- Understanding the concept and process of entrepreneurship
- Acquiring entrepreneurial quality, competency and motivation
- Learning the process and skills of creation and management ofentrepreneurial venture
- Familiarization with various uses of human resource for earningdignified means of living
- Know its contribution in and role in the growth and development of individual and the nation
- Understand the formation of E-cell
- Survey and analyze the market to understand customer needs
- Understand the importance of generation of ideas and product selection
- Learn the preparation of project feasibility report
- Understand the importance of sales and turnover
- Familiarization of various financial and non-financial schemes
- Aware the concept of incubation and starts ups

4066570 ENTREPRENEURSHIP AND STARTUPSPRACTICAL
DETAILED SYLLABUS

Contents: Practical

Unit	Name of the Topics	Hours
1	**Entrepreneurship – Introduction and Process** o Concept, Functions and Importance o Myths about Entrepreneurship o Pros and Cons of Entrepreneurship o Process of Entrepreneurship o Benefits of Entrepreneur o Competencies and characteristics o Ethical Entrepreneurship o Entrepreneurial Values and Attitudes o Motivation o Creativity o Innovation o Entrepreneurs - as problem solvers o Mindset of an employee and an entrepreneur o Business Failure – causes and remedies o Role of Networking in entrepreneurship	**12**
2	**Business Idea and Banking** o Types of Business: Manufacturing, Trading and Services. o Stakeholders: sellers, vendors and consumers and Competitors o E- commerce Business Models o Types of Resources - Human, Capital and Entrepreneurial tools and resources o Selection and utilization of human resources and professionals, etc.	**12**

	○ Goals of Business; Goal Setting ○ Patent, copyright and Intellectual property rights ○ Negotiations - Importance and methods ○ Customer Relations and Vendor Management ○ Size and capital based classification of business enterprises ○ Various sources of Information ○ Role of financial institutions ○ Role of Government policy ○ Entrepreneurial support systems ○ Incentive schemes for state government ○ Incentive schemes for Central governments	
3	**Startups, E-cell and Success Stories** ○ Concept of Incubation centre's ○ Visit and report of DIC , financial institutions and other relevance institutions ○ Success stories of Indian and global business legends ○ Field Visit to MSME's ○ Study visit to Incubation centers and start ups ○ Learn to earn ○ Startup and its stages ○ Role of Technology – E-commerce and Social Media ○ Role of E-Cell ○ E-Cell to Entrepreneurship	**12**
4	**Pricing and Cost Analysis** ○ Unit of Sale, Unit Price and Unit Cost - for single product or service ○ Types of Costs - Start up, Variable and Fixed- **Fixed and variable cost in a garment unit** ○ Break Even Analysis - for single product- **a small garment industry with 5 machines and a single garment**	**12**

	○ **Applicable taxes for garment units and their rate** ○ Understand the meaning and concept of the term Cash Inflow and Cash Outflow ○ Price ○ Calculate Per Unit Cost of a single product- **For a Garment- Shirt, Trouser, Chudidhar, A children dress.** ○ Operational Costs **in a Garment unit** ○ Pricing and Factors affecting pricing. ○ Launch Strategies after pricing and proof of concept	
5	**Business Plan Preparation** ○ Generation of Ideas. ○ Business Ideas vs. Business Opportunities ○ Opportunity Assessment – Factors, Micro and Macro Market Environment ○ Selecting the Right Opportunity ○ Product selection ○ New product development and analysis. ○ Feasibility Study Report – Technical analysis, financial analysis and commercial analysis. **Preparation of Feasibility report for a garment unit with 20 sewing machines** ○ Market Research - Concept, Importance and Process ○ Market Sensing and Testing ○ Marketing and Sales strategy ○ Digital marketing ○ Branding - Business name, logo, tag line. **Familiar brand names in garment manufacturing and selling**	**12**

Note: (i) Unit 1, 2 & 3 contents are common for all diploma programs

(ii) Unit 4 & Unit 5 contents are optional; Conveners/HoDs are requested framing with their branch specific contents.

REFERNCE BOOKS:

1. Dr. G.K. Varshney, Fundamentals of Entrepreneurship, Sahitya Bhawan Publications, Agra - 282002
2. Dr. G.K. Varshney, Business Regulatory Framework , Sahitya Bhawan Publications, Agra - 282002
3. Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, Entrepreneurship , McGraw Hill (India) Private Limited, Noida - 201301
4. M.Scarborough, R.Cornwell, Essentials of Entrepreneurship and small business management, Pearson Education India, Noida - 201301
5. Charantimath Poornima M. Entrepreneurship Development and Small Business Enterprises, Pearson Education, Noida - 201301
6. Trott, Innovation Management and New Product Development, Pearson Education, Noida - 201301
7. M N Arora, A Textbook of Cost and Management Accounting, Vikas Publishing House Pvt. Ltd., New Delhi-110044
8. Prasanna Chandra, Financial Management, Tata McGraw Hill education private limited, New Delhi
9. I. V. Trivedi, Renu Jatana, Indian Banking System, RBSA Publishers, Rajasthan
10. Simon Daniel, HOW TO START A BUSINESS IN INDIA, BUUKS, Chennai - 600018
11. Ramani Sarada, The Business Plan Write-Up Simplified - A practitioners guide to writing the Business Plan, Notion Press Media Pvt. Ltd., Chennai 600095.

Board Examination – Evaluation Pattern

Internal Mark Allocation

Assignment (Theory portion) *	-	10
Seminar Presentation	-	10
Attendance	-	5
Total	**-**	**25**

Note: * Two assignments should be submitted. The same must be evaluated and converted to 10 marks.

Guidelines for assignment:

First assignment – Unit I

Second assignment – Unit II

Guidelines for Seminar Presentation – Unit III

Each assignment should have five three marks questions and two five marks questions.

BOARD EXAMINATION

Note

1. The students should be taught all units and proper exposure and field visit also arranged. All the portions should be completed before examinations.
2. The students should maintain theory assignment and seminar presentation. The assignment and seminar presentation should be submitted during the Board Practical Examinations.
3. The question paper consists of theory and practical portions. All students should write the answers for theory questions (40 Marks) and practical portions (60 Marks) should be completed for board examinations.
4. All exercises should be given in the question paper and students are allowed to select by lot. If required the dimensions of the exercises may

be varied for every batch. No fixed time allotted for each portion and students have liberty to do the examination for 3Hrs.

5. For Written Examination: theory question and answer: 45 Marks
   Ten questions will be asked for 3 marks each. Five questions from each unit 1 & 2. (10 X 3 = 30).
   Three questions will be asked for 5 marks each. One question from each unit 1, 2 & 3. (3 X 5 = 15)
6. For Practical Examination: The business plan/Feasibility report or Report on Unit 4 & 5 should be submitted during the board practical examinations. The same have to be evaluated for the report submission (40 marks).

DETAILED ALLOCATION OF MARKS

Sl. No	Description	Marks
Part A	Written Examination - Theory Question and answer (10 questions x 3 marks:30 marks & (3 questions x 5 marks: 15 marks)	45
Part B	Practical Examination – Submission on Business Plan/Feasibility Report or Report on Unit 4 & 5	40
Part C	Viva voce	15
	Total	100

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4060610

Semester: VI Semester

Subject Title: TEXTILE MANAGEMENT

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4060610 Textile Management	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

S. No	Topics	Hours
I	Introduction to Management, Site selection, Plant layout	15
II	Production and Financial Management	15
III	Human Resource Management	15
IV	Supervisory and Safety Management	14
V	Export Management	14
	Test & Revision	7
Total		80

RATIONALE:

- To study the fundamental concept in personal management, production management and export marketing management.
- To enhance the knowledge for the supervisory job in textile mills,, their authority and responsibility will be taught to the students
- To improve the knowledge in inventory control in stores and also functional management techniques will be taught to the students

OBJECTIVES:

- To know about the fundamentals of management and the various functions of personnel management.
- To have knowledge about components and systems of wage payment.
- To know about the various labour welfare activities in a textile mill.
- To know about the layouts and industrial buildings, factors influencing selection of site.
- To know about productivity, labour and machine productivity and the factors affecting them.
- To know about the role of supervisor in a textile unit, causes and precautions and prevention of industrial acc idents and safety devices used in textile mills..
- To know about inventory control and the methods adopted, material handling in textile mills.
- To know about financial management, cost and its components, calculation of Ex mill price and break even analysis.
- To know about export policy of India, export promoting agencies and their functions, export order processing and export pricing methods.

4060610 TEXTILE MANAGEMENT

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**INTRODUCTION TO MANAGEMENT, SITE SELECTION AND PLANT LAY OUTS** Management – Definition, Functions and Principles. Organization structure of any Textile Unit. Selection of site - Various factors of site selection for various textile industries. Industrial Buildings – Types. Importance of Lighting, Ventilation and Humidification. Plant layout - Process, Product, Combination - their merits and demerits. Suitable Layout for Spinning, Weaving, Processing and Garment industries. Eco Management.	**15**
II	**PRODUCTION AND FINANCIAL MANAGEMENT** Production, Productivity, Labour Productivity Index (LPI) and Machine Productivity Index (MPI). Production Information System, Application of Work Study, Method Study, Time Study and Work Measurement in a Textile Mill. Material Handling – Importance, Various Equipments used for Material Handling in a Textile Industry. Production Planning and Control (PPC) – Functions, Enterprise Resource Planning (ERP). Inventory control - Economic Order Quantity (EOQ), ABC and VED Analysis. Financial Management – Sources of Finance. Cost – Elements, Techniques of Costing, System of Costing - Method of Calculating Ex Mill Price. Break Even Analysis. Depreciation.	**15**
III	**HUMAN RESOURCE MANAGEMENT** HRM – Importance. Man Power Planning, Job Analysis and Job Evaluation. Recruitment – Sources, Selection Process in Recruitment. Training – Importance and types of Training Process. Wages – Its Components. Method of Wage Payment. Incentives – Types, Merits and Demerits. Labour Welfare Activities – Role of Labour Welfare Officer.	**15**

	Labour grievances - Causes Grievance Redressal procedures.	
IV	**SUPERVISORY AND SAFETY MANAGEMENT** Supervisor – Role, Leadership – Role, Difference Between Leader and Manager. Transformational Leadership. Motivation - Need, Importance and Types of motivation - Maslow's theory, XYZ theory in motivation. Communication- Principle of effective communication - types of communication - barriers of communication. Labour welfare activities with respect to factories act. Industrial safety- Causes of accidents, preventive measures. Guards and safety devices in textile mill. Types of fire and fire prevention. Application of 5 S and Kaizen principles for effective supervision.	**14**
V	**EXPORT MANAGEMENT** Importance and benefits of international marketing. World Trade Organisaiton (WTO) – functions of WTO. Various export promotion measures by government of India. Functions of TEXPROCIL, AEPC, PEDEXIL, HEPC and Textile committee. Export procedure - Export incentives. Importance of Shipping bill and bill of lading. Export finance – pre shipment finance and post shipment finance. Letter of Credit. Export pricing-Ex factory, Free On Truck (FOT), Free On Board (FOB), Cost & Freight(C&F), Cost Insurance Freight (CIF) and Franco pricing. Brief Idea about Management Information System (MIS), Just In Time (JIT) and Total Quality Management (TQM).	**14**

TEXT BOOKS:

S.NO	TITLE	AUTHOR	PUBLISHERS	YEAR
1	Principles Of Management	P.C.Tripathi	Tata Mcgrow Publishing Compny Ltd, New Delhi	2001
2	Management Of Textiles	DudegA.V.D	Trade Press, Textile Indistry ,Ahemadabad	1981

REFERENCE:

S.NO	TITLE	AUTHOR	PUBLISHERS	YEAR
1	Industrial Eng. And Management	Balasundaram.K	Sri. Ramalingasowdeswari Publications, Coimbature.	2005
2	Personnel Management Of Humoun Resoures	MamoriA.C.B	Himalaya Pubishingh House, Mumbai	1999
3	Orgisation Theory&Behaviour	Luthans.F	Printece Hall Of India	2001
4	Management Of Textile	Ormerod.A	Butter Worth &Company	1979
5	Industeial Eng. &Management Science	BaugA.T.R;Etal	Khanna Publisher New Delhi	1996
6	Business Management Theory	SingA. J.C & Mugali.V.N	Edition (5) R.Chand & Co, New Delhi	2002
7	Costing In Textle Mills	Sitra	Sitra, Coimbatore	2002

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066620

Semester: VI Semester

Subject Title: APPAREL QUALITY CONTROL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066620 Apparel Quality Control	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

S. No	Topics	Hours
I	Inspection methods & Packing	15
II	Testing of Garments	15
III	Care label and Garment defects	15
IV	Garment Industry Certification	14
V	Sustainable clothing	14
	Test & Revision	7
Total		80

RATIONALE:

The demand and repeat orders are obtained only when the quality of the products are maintained. The industries concentrate more on their product quality and a separate wing operates for achieving the quality. Any negligence in product quality leads to heavy loss particularly in export orders. This subject deals with the quality measurement, assurance of the raw material, in process and final products and the various tests that are being carried out with respect to garment products. The care labelling and certification part is also included.

OBJECTIVES:

At the end of the study of VI Semester the student will be able to

- Understand the inspection methods.
- Learn the sampling procedure and quality audit.
- Understand the various testing procedures to produce quality woven garments.
- Learn the various testing procedures to produce quality knitted garments.
- Learn the various packing accessories in garment industries
- Understand the packing procedure
- Learn the different types of care labeling systems.
- Learn the various defects in garments and analyzing the reasons for them.
- Learn the quality control programs
- Understand the concept of TQM, ISO 9000, WRAP, SA 8000 & BCI
- Learn the sustainable clothing principles and importance

4066620 APPAREL QUALITY CONTROL

DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**INSPECTION METHODS & PACKING** Quality control - Definition - Importance of quality – Inspection process - Raw material Inspection - Fabric Inspection - 4 point System - 10 point System - Inspection of Sewing Thread. In process Inspection – Final Inspection –AQL Inspection. Classification of Packing and its importance - Stand up pack - Flat pack - Hanger pack - Dead man pack – Sandwich pack – Ratio pack, Size wise pack, Color wise pack, Assorted pack and Un-assorted pack - Brief study of Packing materials.	**15**
II	**TESTING OF GARMENTS** Seam strength Testing - Testing of Fabric Stretch properties - Dimensional changes due to Laundering, Dry cleaning and Steaming & Pressing - Durable Press Evaluation of Fabrics and Apparel - Needle cutting / yarn severance - Sewability of fabrics - Bow and Skewness in Woven and Knitted fabrics - Distortion of yarn in Woven Fabrics – Testing of Water Resistance and Water Repellency – Testing for Soil / Stain releasing - Testing of Fusible Interlinings and Elastic Waist Band - Pantyhose Testing - Wear Testing.	**15**
III	**CARE LABELING & GARMENT DEFECTS.** Introduction to Care labels - its importance - Different systems of Care labeling - American - British - Canadian - Japanese - and International labeling. Shade sorting - Introduction - importance Instrumental shade sorting. Flammability - Introduction - Degree Flammability Test method - 45° and Vertical Flammability Tests. Defects in garments – Classification of major, minor and critical defects, pattern defects, spreading defects, cutting defects, stitching defects and seam defects.	**15**

IV	**GARMENT INDUSTRY CERTIFICATION** Quality Control Program - Seven tools of quality controls – Product quality audit. Garment Industry certification – Importance of social compliance – TQM - Procedure of obtaining ISO 9000 series standards - WRAP Certification & Procedures – SA 8000 certification – Eco label certification - GOTS certificate – Oekotex standard100 – Better cotton Initiative (BCI).	**14**
V	**SUSTAINABLE CLOTHING** Sustainable clothing - Definition - Fashion industry and garment consumption – Principles of environmental design – Guidelines for sustainable design – Definition of Redesign & Recycle – Up cycling – Down cycling – Principle of cradle to cradle. Material for sustainable design – Life cycle assessment (LCA). Shifts in Textile Industry – Fibre shift – Manufacturing shift – Technology shift – Consumption shift – Environment shift – Implementation of shifts on future strategies of textile. Brief study of GRS (Global Recycle Standard) certification.	**14**

Text Book:

Title	Author	Publisher	Year
An Introduction to Quality control for The Apparel Industry	Pradip V Mehta	ASQC Quality press. New York.	**2002**
Managing Quality in the Apparel Industry	Pradip V Mehta Satish k Bhardwaj	New Age International Publishers	**1998**

Reference:

Title	Author	Publisher	Year
ISO 9000 Series Manual	-	New Delhi.	**2019**
Knitted clothing Technology	Terry Brackenbary	Black well science Ltd	**1996**
Sustainable Fashion	Kirsi Niinimäki	Aalto University Publications Series,	**2013**
The Big shift	-	Wazir Advisors Pvt. Ltd.	**2018**

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066631

Semester: VI Semester

Subject Title: HOME TEXTILES

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066631 Home Textiles	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

S. No	Topics	Hours
I	Wall & Floor coverings	15
II	Living room furnishing	15
III	Bath Linens & Kitchen Linens	15
IV	Packing & Care Labelling	14
V	Care of Home Textiles	14
	Test & Revision	7
Total		80

RATIONALE:

Home Textile exports in India are in boom now a day. Karur is the major Home textile centre in Tamilnadu. Variety of Made-ups are produced in India and are being exported to Europe, UK, USA, Australia, Canada etc and which fetches a good amount of foreign exchange to our country.

This subject deals with the variety of Home Textile items like wall, floor, furniture, kitchen, bath coverings. Its production process, decorative materials, packing methods, product care and costing are part of the subject. Knowing all these one can able to handle the production and export of these items in a better manner.

OBJECTIVES:

At the end of the study of VI Semester the student will be able to

- Study about domestic and International needs.
- Understand the Various types of Floor & Wall coverings.
- Know about the Furniture coverings.
- Understand the quality parameters of the products.
- Know the types of Kitchen & bath articles.
- Have knowledge of decorating things.
- Understand the packing materials and procedures.
- Learn about types of Care Labelling and its contents.
- Study the various components of cost.
- Understand the cost calculations of various products.

4066631 HOME TEXTILES
DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**WALL & FLOOR COVERINGS** Home textiles- Definition - Domestic and international market needs - India's home textile exports – Classification - fabrics. Wall coverings: - Draperies & Curtains - Plain, with Loop, Loop with Button, Tier curtain, valance, window panel, Tab top curtain, Eyelid, Rod Pocket Panel (RPP). Floor coverings - Mats, Carpets & Rugs - Different types of surface, appearance and Texture used in Floor coverings.	**15**
II	**LIVING ROOM FURNISHING** Chair Linen: - Chair Pad, Chair Cushion, Chair cover, Seat pad (Sutton), Arm cap. Cushions: - Sofa cover, Automobile Seat Cover. Upholstery: - Types - Sofa cover, Automobile Seat Cover. Bed Linen: - Bed Spread, Duvet, Flat sheet, Fitted sheet, Pillow Shan, Quilt, Bed ruffle. Classification of Mattresses and pillows, Comforters and Blankets.	**15**
III	**BATH LINENS & KITCHEN LINENS** Bath Linen: - Shower curtains, Bath rope, Bath Towel, Pool / Beach Towel, Bath Mat, Bath Sheet – Shower curtain – Day night curtain. Kitchen articles: - Apron, Mitten, Pot Holders, Kitchen Towel, Bread basket, Tea cozy - Table cloth, Napkin, Mat, Runner – Covers for Fridge, Mixi and Grinder.	**15**
IV	**PACKING & CARE LABELING** Folding and Packing- importance- materials used- specification- folding machines used- Types of Folding and Packing. Care labeling - Washing, Bleaching, Drying, Ironing and Dry Cleaning Instructions - Placement of labels on Home textiles - Consumer care	**14**

	guide to home textiles - Practices in storage of house hold linen - Pressing and Airing – Storing.	
V	**CARE OF HOME TEXTILES** Water: - Methods of softening water at Home and in the industry. Soaps and Detergents: - Manufacture of soaps and Detergents, Accessing washing efficiency of soaps and detergents. Cleaning & Drying: -Vacuum cleaning of Rugs and carpets, Washing of curtains, draperies, bed linens and kitchen linen - Drying and pressing. Washing: - Kneading and squeezing suction washing. Stain removal: - Identification of stain, general procedure for stains Removal, Bleaches for stain removal.	**14**

Text Book:

Title	Author	Publisher	Year
Textiles – Fibre to Fabric	P.Corbaman	TATA Mcgraw Hill	1983
Textile fabrics and their selection	Isabel.B.Wingate	Prentice Hall – Englewood Cliffs, New Jersey	1976
Easy bazaar crafts	Gerald.M.Knox	Meredith Corporation	1990
Furniture Upholstery	Michal Scofield Sudha Irwin Holly Lyman Antolini	Lane Publishing Co. Monlo Park, California	1980
The Complete Home Decorator	Conran's habitat	Caroline Clifton – Mogg Portland House, New York	1991
Fashion Apparel Accessories & Home Furnishing	Jay Diamond & Ellen Diamond	Dorling Kindrsley Ind. Pvt. Ltd., New Delhi-110092	2008

Reference:

Title	Author	Publisher	Year
ASTM Standards related to stitches and seams	Robert.F.Allen	ASTM, 100 Barr Harbour drive West Conshohocken	1998
Hand woven carpets oriental and Europian	A.F.Kendrick	Dover Publicaions,INC, New York	1973
Oriental carpet Designs in Full color	Saraf Friedrich Trenkwano	Dover Publications INC, New York	1979
The mccalls Book of Quilts	John Murray	Mcall's Needle work The mccall pattern company	1964
Hand Woven fabric of India	Jasteen Dhamija & Jyotindra Jain	Mapin Publishing Pvt. Ltd., Ahmedabad.	1989
Designs and Pattern of North African Carpets and Textiles	Jacquar Rovailt	Dover Pulbication, New York	

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066632

Semester: VI Semester

Subject Title: FASHION DRAPING

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066632 Fashion Draping	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

Topics and Allocation of Hours:

S. No	Topics	Hours
I	Introduction to Draping	15
II	Draping of Bodice block and Variations	15
III	Draping of Yoke, Sleeves & Collars	15
IV	Draping of Slacks & Skirts	14
V	Draping of advanced design variations & Knit Garments	14
	Test & Revision	7
Total		80

RATIONALE:

Draping is an art of wrapping the dress materials on the body. The same technique is extended to produce required patterns of basic and complicated styles of garment. This subject deals with the preparation of patterns of various parts of the garment without drawing tools, measurements but with the aid of relevant dummy or mannequin.

OBJECTIVES:

At the end of the study of VI Semester the student will be able to

- Understand the Draping tools & Procedure.
- Learn about draping of basic bodice& sleeves
- Understand the draping of Bodice blocks & its variations.
- Learn about introduction of varies fullness.
- Understand the draping of Skirts
- Understand the draping of Slacks.
- Learn the draping of Yokes & collars
- Understand the draping of sleeves.
- Understand the draping of advanced design variations.
- Learn the draping of knit garments.

4066632 FASHION DRAPING
DETAILED SYLLABUS

Contents: Theory

Unit	Name of the Topic	Hours
I	**INTRODUCTION TO DRAPING** Definition of Draping – Draping Tools & Equipments – Draping principles – Preparation of muslin for Draping – Seam allowance – Preparation of Dress form for Draping. Draping of Basic Bodice front – Preparation of muslin – Draping steps – Marking – Truing - Draping of Basic Bodice Back – Draping of Basic Sleeve – Draping of Basic Skirt.	**15**
II	**DRAPING OF BODICE BLOCKS & VARIATIONS** Front Bodice with under arm Dart – Back Bodice with Neckline Dart – Dart manipulation – Waist line Dart – Dart at waistline and centre front – French Dart – Double French Dart – Flange Dart – Neckline Dart -– Neckline variations – Front & Back Armhole variations – Typical sleeveless – Squared – Cutaway Waist line variation – lowered – Empire – Shortened – Scalloped – Pointed. The Princes Bodice – Cowls – front – Under arm cowl – Wrapped neckline cowl. Twists – Butterfly Twist – Neck yoke twist – Bust twist.	**15**
III	**DRAPING OF YOKES, SLEEVES & COLLARS** Draping of fitted midriff Yoke –– Shirt yoke – Hip Yoke. Draping of – Mandarin Collar – Convertible collar – Peterpan collar. Draping of Basic Dolman sleeve – Long fitted Dolman sleeve –– Reglan sleeve – Kimono sleeve with a gusset.	**15**
IV	**DRAPING OF SKIRTS & SLACKS** Draping of one piece basic skirt – Gored skirt – Flared skirt – Pleats in the flared skirt – Gathers in the flared skirt – Pleated skirt – Side & Box pleated skirt – Kick pleated and inverted pleated skirt – Divided skirt. Draping of basic straight slacks – Fitted slacks – Tapered slacks – Pegged slacks.	**14**

V	**DRAPING OF ADVANCED DESIGN VARIATIONS & KNIT GARMENTS** Draping of bias – Cut slip Dress – Bustier Designs – basic Knit Bodice Dress – Knit Halter - Knit Leotard - Knit Panties - Draping of peplums. Draping of 'A' line shift – Draping of Princess Dress – Draping of Basic Jacket. Draping of Flounces – Circular flounce – Shirred Flounce – Draping of Ruffles – Variable Ruffle finishes.	**14**

Text Book:

Title	Author	Publisher	Year
The Art of Fashion Draping	Connie Amaden Crawford	Fair Child Publication, New York Om Books International, New Delhi	2005
Draping for Fashion Design	Hilde Jaffe & Nurie Relis	Prentice Hall career & Technology, Engle wood Cliffs, USA	2002

Reference:

Title	Author	Publisher	Year
Draping for Fashion Design	Hilde Jaffe & Nurie Relis	Dorling Kindersley India Pvt Ltd., New Delhi-110092	**2009**

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

M-SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066640

Semester: VI Semester

Subject Title: ADVANCED PATTERN DRAFTING AND CONSTRUCTION PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066640 Advanced Pattern Drafting and Construction Practical	**6**	**96**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Garment production starts with drafting of patterns of various parts of the garment. This technique helps the manufacturers in assembling the parts perfectly in the next process. Further it assists to calculate the requirement of fabric for garment construction and subsequently reduced fabric consumption and increased profits. This practical subject provides hands on experience on the method of drafting each every part of advanced styles of garments with variety of front, back, yoke, collar, cuff, skirt panels etc.

GUIDELINES:

- All the sixteen experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate drafting table and drafting tools for creating patterns of various parts in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than two students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Pattern preparation / Garment construction	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES:

Children's wears:

- To Prepare Layout and Sew Party dress for kids with suitable fullness.
- To prepare the paper pattern for the Garment –Peplum Blouse for children using the style features given below.
    - Back Open.
    - Normal Fitting.
    - Short Gathers in waist (Peplum).
    - Short Puff Sleeve.

- To Prepare Layout and Sew Peplum Blouse with stone work.
- To get practical knowledge on advanced garment styles.
- To get knowledge on various value addition techniques on garments.
- To know the introduction of various fullness and Decoration on garments

Ladies' wears.

- To prepare the paper pattern for the styles given below

- Sari blouse with the following details.
    - Tight Fitting.
    - Front Open & Front Waist Yoke.
    - Petal Sleeve.
    - Decorative Back Neck.
- To Prepare Layout and Sew Sari blouse with suitable decorations.
- To Prepare Layout and Sew Ladies party wear with suitable decorations.
- To Prepare pattern and sew a Designer Hand Bag.
- To Prepare pattern and sew a Kitchen Apron.

Gents' wears.

- To prepare the paper pattern for Men's coat.
- To prepare the paper pattern for Lab coat.
- To prepare the paper pattern for Automobile works uniform.

LIST OF EQUIPMENT

Equipment required:

- Pattern table- 8'x4' table- 4 nos.

Materials required:

- Pattern paper- 30 no / experiment /batch of 30 students
- Measuring, drafting & general tools-30/ batch of 30 students

LIST OF EXPREIMENTS

1. Using the given pattern cut and Sew Party dress for kids with suitable fullness.
2. Prepare pattern of Peplum Blouse for children using the style features given below.
    - Back Open.
    - Normal Fitting.
    - Short Gathers in waist (Peplum).
    - Short Puff Sleeve.
3. Using the given pattern cut and Sew Peplum Blouse with stone work.
4. Prepare pattern of sari blouse using the style features given below.
    - Tight Fitting.
    - Front Open & Front Waist Yoke.
    - Petal Sleeve.
    - Decorative Back Neck.
5. Using the given pattern cut and Sew Sari blouse with suitable decorations.
6. Design & Prepare pattern for Men's coat.
7. Prepare pattern for Laboratory over coat.
8. Using the given pattern cut and Sew Laboratory coat.
9. Prepare pattern and sew a Designer Hand Bag.
10. Prepare pattern and sew Kitchen apron.
11. Prepare pattern for Automobile Work uniform.
12. Using the given pattern cut and Sew Automobile Work Uniform.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066650

Semester: VI Semester

Subject Title: FASHION DRAPING PRACTICAL

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
			Marks			Duration
	Hours / Week	Hours / Semester	Internal Assessment	Board Examination	Total	
4066650 Fashion Draping Practical	**5**	**80**	**25**	**100***	**100**	**3 Hrs.**

*** Examinations will be conducted for 100 marks and will be reduced to 75 marks.**

RATIONALE:

Draping is very important skill for fashion designers. It is the process of positioning and pinning fabric on a dress form to develop the structure of a garment design. After draping, the fabric is removed from the dress form and traced on paper to create the pattern for the garment. Draping can be approached in 2 ways mainly

1. Planned way of draping – based on reference image / sketch
2. Spontaneous draping - driven by the weight and fall of the fabric

GUIDELINES:

- All the twelve experiments given in the list of experiments should be completed and given for the end semester practical examination.

- In order to develop best skills every students should be provided with a separate sewing machine with attachments for creating garments in the laboratory.

- The external examiners are requested to ensure that a single experimental question should not be given to more than three students while examining a batch of 30 students during Board Examinations.

ALLOCATION OF MARKS

Draped pattern preparation	60 marks
Write up	30 marks
Viva	10 marks
Total	100 Marks

OBJECTIVES:

To prepare pattern using Draping Technique.

- Basic bodies' - Front & Back
- Basic Skirt.
- Basic Sleeve.
- Lowered Waistline.
- Pointed Waistline.
- Empire Waistline.
- Princess Bodies.
- Pleated Skirt.
- Tapered Slacks.
- Skirt with Hip Yoke.
- Reglan Sleeve.
- Basic Jacket.

LIST OF EQUIPMENT

Equipment / Machines / Instruments required:

- Dress forms
- Mannequin
- Pattern/ cutting table
- Measuring tools
- Drafting tools
- Construction tools
- General tools

Sewing machines-

- Lock stitch- 10 Nos.
- Over lock- 1 No
- Flat lock* 1 No
- Button hole* I No
- Button stitch* 1 No
- 4- needle trimmer* 1 No
- Chain stitch* 1 No
- Feed- off-arm* 1 No

***- OPTIONAL**

Material required:

- 10 meters of fabric/ expt./ batch of 30 students.
- Sewing threads- white, assorted
- Decorative materials.

LIST OF EXPREIMENTS

1. Prepare basic bodies' pattern for Front & Back by Draping Technique.
2. Construct Basic Skirt using draping technique.
3. Construct Basic Sleeve using draping technique.
4. Construct Lowered Waistline garment using draping technique.
5. Construct Pointed Waistline garment using draping technique.
6. Construct Empire Waistline garment using draping technique.
7. Construct Princess Bodies using draping technique.
8. Construct Pleated Skirt using draping technique.
9. Construct Tapered Slacks using draping technique.
10. Construct Skirt with Hip Yoke using draping technique.
11. Construct Reglan Sleeve using draping technique.
12. Construct Basic Jacket using draping technique.

STATE BOARD OF TECHNICAL EDUCATION & TRAINING, TAMILNADU

DIPLOMA IN GARMENT TECHNOLOGY

N -SCHEME

(To be implemented to the students admitted from the year 2020-2021 onwards)

Course Name: DIPLOMA IN GARMENT TECHNOLOGY

Course Code: 1066

Subject Code:4066660

Semester: VI Semester

Subject Title: PROJECTWORK AND INTERNSHIP

TEACHING AND SCHEME OF EXAMINATION

No of weeks per semester: 16 weeks

Subject Title	Instructions		Examination			
	Hours / Week	Hours / Semester	Marks			Duration
			Internal Assessment	Board Examination	Total	
4066660 Project work and Internship	**6**	**96**	**25**	**100***	**100**	**3 Hrs.**

***Examination will be conducted for 100 marks and will be converted to 75 marks. Minimum Marks for Pass is 50 out of which minimum 50 marks should be obtained out of 100 marks in the Board Examination alone.**

OBJECTIVES:

1. Implement the theoretical and practical knowledge gained through the curriculum into an application suitable for a real practical working environment preferably in an industrial environment
2. Get exposure on industrial environment and its work ethics through internship
3. Learn and understand the gap between the technological knowledge acquired through curriculum and the actual industrial need and to compensate it by acquiring additional knowledge as required.
4. Carry out cooperative learning through synchronous guided discussions within the class in key dates, asynchronous document sharing and discussions, as well as to prepare collaborative edition of the final project report.

PROJECT WORK:

Students have to select any one topic of their own interest under the guidance of the department faculty in their area of specialization, emphasizing the principles studied in the theory and practical subjects. The selected topics must be related to Textile manufacturing process in Spinning/Weaving/Textile wet processing/Knitting/Garment making/ Problems related to quality control waste control, process control, productivity control, machinery maintenance in Textile Industries. After completing the work, they have to submit their findings in the form of a report through the guide and Head of the Department. A viva-voce is conducted on the report submitted by the student. The number of students in a batch for a project work shall not exceed six.

INTERNSHIP:

The internship training for a period of two weeks shall be undergone by every candidate at the end of IV / V semester during vacation. The certificate shall be produced along with the internship report for evaluation. The evaluation of internship training shall be done along with final year “Project Work & Internship” for 20 marks. The internship shall be undertaken in any industry / Government or Private certified agencies which are in social sector / Govt. Skill Centres / Institutions / Schemes.

A neatly prepared PROJECT REPORT as per the format has to be submitted by individual student during the Project Work &Internship Board examination.

INTERNAL ASSESSMENT:

The internal assessment should be calculated based on the review of the progress of the work done by the student periodically as follows.

Detail of assessment	Period of assessment	Max. Marks
First Review	6th week	10
Second Review	12th week	10
Attendance	Entire semester	5
Total		**25**

EVALUATION FOR BOARD EXAMINATION:

Details of Mark allocation	Max Marks
Demonstration/Presentation	**25**
Report	**25**
Viva Voce	**30**
Internship report	**20**
Total	**100**