

Curriculum
of
Diploma Programme
in
Fashion & Clothing Technology



State Board of Technical Education (SBTE)
Bihar

Semester –III Teaching & Learning Scheme

Board of Study	Course Codes	Course Titles	Teaching & Learning Scheme (Hours/Week)					Total Credits (C)
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+SL)	Total Hours (CI+LI+TW+SL)	
			L	T				
	2451301	Fabric Construction	3	-	4	2	9	6
	2451302	Advance Pattern Making	3	-	4	2	9	6
	2451303	Indian & World Costumes	3	-	4	2	9	6
	2451304	Kids Wear Garment Construction	3	-	4	2	9	6
	2451305	Resource Management in Garment Manufacturing	3	-	-	2	5	4
	2451306	Summer Internship – I (After 2 nd Sem) (Common for all programmes)	-	-	2	2	4	2
Total			15	-	18	12	45	30

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note:

TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of teacher to ensure outcome of learning

Semester –III Assessment Scheme

Board of Study	Course Codes	Course Titles	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
	2451301	Fabric Construction	30	70	20	30	20	30	200
	2451302	Advance Pattern Making	30	70	20	30	20	30	200
	2451303	Indian & World Costumes	30	70	20	30	20	30	200
	2451304	Kids Wear Garment Construction	30	70	20	30	20	30	200
	2451305	Resource Management in Garment Manufacturing	30	70	20	30	-	-	150
	2451306	Summer Internship – I (After 2 nd Sem) (Common for all programmes)	-	-	10	15	10	15	50
Total			150	350	110	165	90	135	1000

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self learning, any other student activities etc.

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
 - Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done internally (40%) as well as externally (60%). Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar, and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/ presentation related to these activities will be carried out by external faculty/expert (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course.
- For valid and reliable assessment, the internal faculty should prepare checklist & rubrics for these activities.

- A) **Course Code** : 2451301(T2451301/P2451301/S2451301)
 B) **Course Title** : Fabric Construction
 C) **Pre- requisite Course(s)** :
 D) **Rationale:**

Fashion designing students have to deal with different fabrics to produce novelty in garments. The detailed study of woven fabric construction helps them to identify and redevelop different types of fabrics according to the characteristics as per requirements of end use. Study of basic concepts of fabric structure such as threads per unit length, crimp %, weave design, draft and peg plan help them to design/redesign innovative fabric for garments.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/ laboratory/ workshop/ field/ industry.

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

- CO-1.** Develop different interlace yarn swatches.
CO-2. Redevelop relevant plain weave fabric.
CO-3. Develop relevant twill weave fabric for creation of designed garment.
CO-4. Develop relevant satin weave fabric for developing garment.
CO-5. Develop relevant fancy weaves for fashion trends.
CO-6. Use relevant compound fabric for given requirements.

- F) **Suggested Course Articulation Matrix (CAM):**

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO- 1	PSO- 2
CO-1	3	1	3	2	2	-	1		
CO-2	3	1	3	2	2	-	-		
CO-3	3	1	3	3	2	-	-		
CO-4	3	1	3	3	2	-	-		
CO-5	3	2	3	3	2	-	3		
CO-6	3	2	3	3	1	-	3		

Legend: High (3), Medium (2), Low (1) and No mapping (-)

* PSOs will be developed by respective programme coordinators at institute level. As per latest NBA guidelines, formulating PSOs is optional

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	Total Credits (C)
			L	T				
Fashion and Clothing Technology	2451301	Fabric Construction	03	-	04	02	09	06

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term Work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note: TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of the teacher to ensure the outcome of learning.

H) Assessment Scheme:

Board of Study	Course Code	Course Title	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
FCT	2451301	Fabric Construction	30	70	20	30	20	30	200

Legend:

PTA: Progressive Theory Assessment in classroom (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self-learning, any other student activities etc.)

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
- Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done **internally (40%)** as well as **externally (60%)**. Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/presentation related to these activities will be carried out by external faculty/experts (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course. For valid and reliable assessment, the internal faculty should prepare checklists & rubrics for these activities.

I) **Course Curriculum Detailing:** This course curriculum detailing depicts learning outcomes at course level and session level and their attainment by the students through Classroom Instruction (CI), Laboratory Instruction (LI), Term Work (TW) and Self-Learning (SL). Students are expected to demonstrate the attainment of Theory Session Outcomes (TSOs) and Lab Session Outcomes (LSOs) leading to attainment of Course Outcomes (COs) upon the completion of the course. While curriculum detailing, NEP 2020 related reforms like Green skills, Sustainability, Multidisciplinary aspects, Society connect, Indian Knowledge System (IKS) and others must be integrated appropriately.

J) **Theory Session Outcomes (TSOs) and Units: T2451301**

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 1a.</i> Draw an interlacement diagram of given design.</p> <p><i>TSO 1b.</i> Represent the simple fabric design by the relevant method.</p> <p><i>TSO 1c.</i> Define the design, draft, peg plan and weave repeat for the given fabric.</p> <p><i>TSO 1d.</i> Select relevant draft for given design with justification.</p> <p><i>TSO 1e.</i> Justify the relationship between draft and peg plan for given design with sketches.</p> <p><i>TSO 1f.</i> Differentiate between different fabrics based on characteristic features</p>	<p>Unit-1.0 Basics of Fabric Structure</p> <p>1.1 Interlacement diagram of weave</p> <p>1.2 Fabric Quality parameters - i) Threads/cm or Threads/Inch EPI-EPcm-EPdm PPI-PPcm-PPdm ii) Warp count Tex, Denier, English cotton count Weft count iii) Warp cover factor, Weft cover factor, Fabric cover factor iv) Weight in gms/m²</p> <p>1.3 Concept of Design, Draft, Lifting plan, denting order.</p> <p>1.4 Characteristics features of following fabric; Poplin, Voile, Cambric, Chiffon, Dhoti, Lawn. Concept of design, draft and peg plan and their relationship</p>	CO1
<p><i>TSO 2a.</i> Draw design, draft, and peg plan for the given weave.</p> <p><i>TSO 2b.</i> Classify the given weaves into different categories of plain weave.</p> <p><i>TSO 2c.</i> Describe the characteristics features of a given weave.</p> <p><i>TSO 2d.</i> Create the design by using a given fabric weave repeat.</p> <p><i>TSO 2e.</i> Develop the rib effect by using the warp and weft rib weaves.</p>	<p>Unit-2.0 Plain Woven Structures</p> <p>2.1 Interlacing Diagram plain weave, Design, draft, lifting plan & denting order of plain weave.</p> <p>2.2 Characteristic feature of plain woven fabric. Cross – sectional views of plain weave.</p> <p>2.3 Rib & cord effects produced in plain weave Derivatives -Warp Rib weaves, Weft Rib weaves, Hopsack, Mat or Basket weaves.</p>	CO1, CO2
<p><i>TSO 3a.</i> Draw the design of twill weave by using a given weave repeat.</p> <p><i>TSO 3b.</i> Explain the features of twill weave fabrics.</p> <p><i>TSO 3c.</i> Classify the given weave into different categories of twill weave.</p> <p><i>TSO 3d.</i> Develop a design of balanced/unbalanced twill weave using a given repeat.</p> <p><i>TSO 3e.</i> Develop designs, drafts, peg plans for various derivatives of twill weave.</p> <p><i>TSO 3f.</i> Differentiate between weaves and fabrics for any two derivatives of twill weave.</p>	<p>Unit-3.0 Twill weave structures</p> <p>3.1 Design of Basic Twills,</p> <p>3.2 Characteristic feature of twill woven fabric,</p> <p>3.3 Classification of basic twills.</p> <p>3.4 Balanced twill-Design, draft, denting order & lifting plan</p> <p>3.5 Unbalanced twill- Warp and weft faced twill, Design, draft, denting order & lifting plan with cross section.</p> <p>3.6 Derivatives of Twill weave- Design, draft, denting order & lifting plan of following twills Pointed twill, Herringbone, Transposed twill weave, Diamond twill weave.</p>	CO3

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 4a.</i> Illustrate with features of satin/sateen weaves</p> <p><i>TSO 4b.</i> Select the suitable move number for a given weave repeat to construct satin weave.</p> <p><i>TSO 4c.</i> Draw the design, draft, peg plan for a given satin weave.</p>	<p>Unit-4.0 Satin/ Sateen weaves</p> <p>4.1 Characteristic feature of satin & sateen woven fabrics, Interlacement diagram, Concept of move number.</p> <p>4.2 Development of regular satin weave, Draft, denting order & lifting plan, interlacing diagram of regular satin.</p> <p>4.3 Development of irregular satin weave, Draft, denting order & lifting plan, Interlacing diagram of regular satin irregular satin weave</p>	<p>CO4</p>
<p><i>TSO 5a.</i> Describe the features of crepe, huck-a-back, honey comb, mock leno weaves.</p> <p><i>TSO 5b.</i> Draw the design, draft, peg plan for, huck-a-back, honey comb, mock leno</p> <p><i>TSO 5c.</i> Draw the design, draft, peg plan for crepe weaves</p> <p><i>TSO 5d.</i> Distinguish between honeycomb and brighton honeycomb</p>	<p>Unit-5.0 Fancy Woven Fabrics</p> <p>5.1 Characteristic features of Crepe, Huck-a-back structures, Ordinary Honey-comb structures, Simple Mock- Leno Structure</p> <p>5.2 Development of Huck-a-Back structures-, Huck-a-back structure on six, ten and twelve picks, Development of Honey-comb structures-, Honey-comb structure having equal warp & weft floats, Development of Mock- Leno Structure, Construction of on 6x6, Mock- Leno Structure on 8x8,10x10,</p> <p>5.3 Construction of Crepe weaves, Constructions of crepe weaves upon sateen bases, Combination of floating weave upon plain threads, Comparison of different structures of honeycomb</p>	<p>CO5</p>
<p><i>TSO 6F.</i> Develop the design of Plain faced Bedford cord and Ordinary Welt Including draft, peg plan and denting order.</p> <p><i>TSO 6G.</i> Make use of Backed cloth, Double cloth, and Extra warp and Weft for garment designing.</p> <p><i>TSO 6H.</i> Identify Leno structure for fashion style.</p> <p><i>TSO 6I.</i> Classify pile structure.</p>	<p>Unit-6.0 Compound Fabric Structure</p> <p>6.1 Marking Design, Draft, Peg plan & denting order for Plain faced Bedford cord & ordinary Welt.</p> <p>6.2 Concept of and end use of following fabrics-</p> <ul style="list-style-type: none"> • Backed cloth • Double cloth • Extra Warp & Weft cloth <p>6.3 Principles of Leno structure and its application</p> <p>6.4 Classification of pile structure</p>	<p>CO6</p>

Note: One major TSO may require more than one Theory session/Period.

K) Suggested Laboratory (Practical) Session Outcomes (LSOs) and List of Practical: P2451301

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<i>LSO 1.1.</i> Identify the structure of given fabric sample.	1.	Use fabric samples to : (i) Identify the interlacement of warp and weft. (ii) Identify and Mark warp and weft direction. (iii) Determine ends per Inch and Picks Per Inch	CO1
<i>LSO 2.1.</i> Analyze plain weave.	2.	Use analysis tool kit to analyze the plain weave (i) Estimate the EPI, PPI, warp/weft- count plain weave fabric. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design on point paper.	CO2
<i>LSO 3.1.</i> Analyze warp/weft Rib weave.	3.	Use analysis tool kit to analyze the warp/weft Rib weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO2
<i>LSO 4.1.</i> Analyze Matt Rib weave.	4.	Use analysis tool kit to analyze the Matt Rib weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO2
<i>LSO 5.1.</i> Analyze basic twill weave.	5.	Use analysis tool kit to Analyze the basic twill weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO3
<i>LSO 6.1.</i> Analyze herringbone twill weave	6.	Use analysis tool kit to Analyze the herring bone twill weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design on point paper.	CO3
<i>LSO 7.1.</i> Analyze pointed twill weave.	7.	Use analysis tool kit to analyze the pointed twill weave sample to: (i) Estimate the EPI, PPI, warp/weft- count (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO3
<i>LSO 8.1.</i> Analyze satin weave weave	8.	Use analysis tool kit to analyze the satin weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO4
<i>LSO 9.1.</i> Analyze crepe weave.	9.	Use analysis tool kit to analyze the crepe weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO5
<i>LSO 10.1.</i> Analyze honeycomb weave	10.	Use analysis tool kit to analyze the honeycomb weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design point paper	CO5

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
LSO 11.1. Analyze pile weave.	11.	Use analysis tool kit to analyze the pile weave sample to: (i) Estimate the EPI, PPI, warp/weft- count. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design	CO6

L) **Suggested Term Work and Self Learning: S2451301** Some sample suggested assignments, micro project and other activities are mentioned here for reference.

a. Assignments:

- 1) Draw the different designs of plain weave
- 2) Draw the different designs of twill weave on point paper.
- 3) Draw the different designs of satin weave and fancy weave.

b. Micro Projects:

1. Collect ten woven fabric samples and mark warp weft direction.
2. Develop swatches of plain weave and its derivatives sample using sample loom.
3. Develop swatches of twill weave and its derivatives sample using sample loom.
4. Develop swatches of satin weave and its derivatives sample using sample loom.
5. Develop swatches of color and weave effect samples using sample loom.
6. Develop swatches of fancy weave structure using sample loom

c. Other Activities:

1. Seminar Topics:
 - Plain weave and its derivatives.
 - Applications of twill weave
 - Methods of color and weave effect.
 - Effect of weave and technical parameters on fabric appearance.
2. Visits: Visit nearby weaving units. Prepare a report of job cards and technical specification of looms.
3. Self-learning topics:
 - Double Cloth.
 - Backed Fabrics and their advantage.
 - Plush fabrics and their applications.

M) Suggested Course Evaluation Matrix: The course teacher has to decide and use appropriate assessment strategy and its weightage in theory, laboratory and Term Work for ensuring CO attainment. The response/performance of each student in each of these designed activities is to be used to calculate **CO attainment**.

COs	Course Evaluation Matrix						
	Theory Assessment (TA)**		Term Work Assessment (TWA)			Lab Assessment (LA)#	
	Progressive Theory Assessment (PTA) Class/Mid Sem Test	End Theory Assessment (ETA)	Term Work & Self Learning Assessment			Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)
			Assignments	Micro Projects	Other Activities*		
CO-1	15%	15%	15%	-	-	20%	10%
CO-2	10%	10%	10%	20%	-	10%	10%
CO-3	15%	15%	15%	20%	33%	15%	20%
CO-4	20%	20%	20%	20%	33%	15%	20%
CO-5	20%	20%	20%	20%	34%	20%	20%
CO-6	20%	20%	20%	20%	34%	20%	20%
Total Marks	30	70	20	20	10	20	30
			50				

Legend:

*: Other Activities include self- learning, seminar, visits, surveys, product development, software development etc.

** : Mentioned under point- (N)

: Mentioned under point-(O)

Note:

- The percentage given are approximate
- In case of Micro Projects and End Laboratory Assessment (ELA), the achieved marks will be equally divided in all those COs mapped with total experiments.
- For CO attainment calculation indirect assessment tools like course exit survey need to be used which comprises of questions related to achievement of each COs.

N) Suggested Specification Table for End Semester Theory Assessment: Specification table represents the reflection of sample representation of assessment of cognitive domain of full course.

Unit Title and Number	Total Classroom Instruction (CI) Hours	Relevant COs Number(s)	Total Marks	ETA (Marks)		
				Remember (R)	Understanding (U)	Application & above (A)
Unit-1.0 Basics of Fabric Structure	06	CO1	10	2	4	4
Unit-2.0 Plain woven structures	06	CO2	10	4	6	4
Unit-3.0 Twill weave structures	10	CO3	16	4	6	4
Unit-4.0 Satin/Sateen weaves	05	CO4	12	4	2	4
Unit-5.0 Fancy woven Fabrics	12	CO5	12	4	4	4
Unit-6.0 Compound fabric structure	09	CO6	10	2	4	4
Total	48	-	70	20	26	24

Note: Similar table can also be used to design class/mid-term/ internal question paper for progressive assessment.

O) Suggested Assessment Table for Laboratory (Practical):

S. No.	Laboratory Practical Titles	Relevant COs Number(s)	PLA/ELA		
			Performance		Viva - Voce (%)
			PRA* (%)	PDA** (%)	
1 TO 11	Use analysis tool kit to analyze the plain/twill/satin/matt rib/pointed twill weave (i) Estimate the EPI, PPI, warp/weft- count plain weave fabric. (ii) Calculate cover factor, weight per unit area. (iii) Represent the design on point paper.	CO1, CO2, CO3, CO4, CO5	70	20	10

Legend:

PRA*: Process Assessment

PDA**: Product Assessment

Note: This table can be used for both end semester as well as progressive assessment of practical. Rubrics need to be prepared by the course teacher for each experiment/practical to assess the student performance.

P) Suggested Instructional/Implementation Strategies: Different Instructional/ Implementation Strategies may be appropriately selected, as per the requirement of the content/outcome. Some of them are Improved Lecture, Tutorial, Case Method, Group Discussion, Industrial visits, Industrial Training, Field Trips, Portfolio Based, Learning, Role Play, Live Demonstrations in Classrooms, Lab, Field Information and Communications Technology (ICT)Based Teaching Learning, Blended or flipped mode, Brainstorming, Expert Session, Video Clippings, Use of Open Educational Resources (OER), MOOCs etc.

Q) List of Major Laboratory Equipment, Tools and Software:

S. No	Name of Equipment, Tools and Software	Broad Specifications	Relevant Experiment/Practical Number
1.	Pick Glass	Reflex type 1 inch counting glass ,plain weave fabric sample with 50 EPI X 20 PPI and 70 EPI X 50 PPI.	All
2.	Power Loom	Plain power loom reed width of 60 inch/ 48inch and attached with lose reed, tappet shedding mechanism.	
3.	Wrap reel	Wrap reel and Weighing balance with weight range of Min 0.2gm to Max. 500g.	
4.	Winding Machine	Cone Winding machine (Model 338 RM, count range 2 to 100 Ne, yarn traverse 3 to 6 inch)	
6.	Ring Yarn	Ring yarn with count range 5, 10, 15 Ne and Manmade yarns with 150D, 300D.	

R) Suggested Learning Resources:**(a) Books:**

S. No.	Titles	Author(s)	Publisher and Edition with ISBN
1.	Woven Structure and design – Part 1 Single cloth Construction	Doris Goarner	WIRA Technology Group – 1986 ISBN : 9780900820175
2.	Watson's Textile Design and Colour	Z.J.Grosicki	Woodhead Publishing; 7th edition ISBN-9781855739956
3.	Watson's Advanced	Z.J.Grosicki	Woodhead Publishing limited, Cambridge England,1975, ISBN:978185739956
4.	Textile Design	N.Gokarneshan	Woodhead Publishing limited, Cambridge England,, ISBN:185573 9968

(b) Online Educational Resources:

1. <http://textilefashionstudy.com/properties-of-crepe-weave-types-of-crepe-weave/>
2. <https://textileapex.blogspot.in/2014/03/huckaback-mockleno-wave.html>
3. <https://www.slideshare.net/bhushanaec/huckaback-weave-60106128>
4. <http://nptel.ac.in/courses/116102005/26>
5. <http://nptel.ac.in/courses/116102005/27>
6. <http://nptel.ac.in/courses/116102005/28>

Note: Teachers are requested to check the creative commons license status/ financial implications of the suggested, online educational resources before use by the students.

- A) **Course Code** : 2451302(T2451302/P2451302/S2451302)
 B) **Course Title** : Advance Pattern Making
 C) **Pre- requisite Course(s)** : Basic Pattern Making
 D) **Rationale** :

Advance Pattern Making encompasses a wide range of techniques that go beyond Basic Pattern Making. It involves the creation of precise and detailed patterns that serves as the foundation for producing high quality and well-fitting garments. It allows for customization and innovation in garment design. It enables designers to translate their creative ideas into practical patterns that can be produced in multiple sizes & variation. It combines technical expertise, creativity, and precision to ensure that garments not only look aesthetically pleasing but also fit well and meet expectations of consumers. Through this course it is intended to develop advanced pattern making abilities in the students.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/laboratory/workshop/field/ industry.

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

- CO-1** Prepare patterns for different stylelines, ruched and twisted knot dresses.
CO-2 Create varied patterns of skirts by manipulating basic skirt sloper.
CO-3 Create varied patterns of trousers by manipulating basic trouser sloper.
CO-4 Create patterns for strapless designs using basic bodice sloper.
CO-5 Grade the patterns into desired sizes using suitable grading techniques.

- F) **Suggested Course Articulation Matrix (CAM):**

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2
CO-1	3	1	2	3	-	-	1	-	-
CO-2	3	1	2	3	-	-	1	-	-
CO-3	3	1	2	3	-	-	1	-	-
CO-4	3	1	2	3	-	-	1	-	-
CO-5	3	1	-	3	-	-	1	-	-

Legend: High (3), Medium (2), Low (1) and No mapping (-)

* PSOs will be developed by respective programme coordinator at institute level. As per latest NBA guidelines, formulating PSOs is optional

* Various pattern making tools are used to develop patterns

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	Total Credits (C)
			L	T				
FCT	2451302	Advance Pattern Making	03	-	04	02	09	06

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term Work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note: TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of teacher to ensure outcome of learning.

H) Assessment Scheme:

Board of Study	Course Code	Course Title	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
FCT	2451302	Advance Pattern Making	30	70	20	30	20	30	200

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self-learning, any other student activities etc.)

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
- Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done **internally (40%)** as well as **externally (60%)**. Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/presentation related to these activities will be carried out by external faculty/expert (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course. For valid and reliable assessment, the internal faculty should prepare checklist & rubrics for these activities.

I) **Course Curriculum Detailing:** This course curriculum detailing depicts learning outcomes at course level and session level and their attainment by the students through Classroom Instruction (CI), Laboratory Instruction (LI), Term Work (TW) and Self Learning (SL). Students are expected to demonstrate the attainment of Theory Session Outcomes (TSOs) and Lab Session Outcomes (LSOs) leading to attainment of Course Outcomes (Cos) upon the completion of the course. While curriculum detailing, NEP 2020 related reforms like Green skills, Sustainability, Multidisciplinary aspects, Society connect, Indian Knowledge System (IKS) and others must be integrated appropriately.

J) **Theory Session Outcomes (TSOs) and Units: T2451302**

Major Theory Session Outcomes (TSOs)	Units	Relevant Cos Number(s)
<p><i>TSO 1a.</i> Enlist the different types of stylelines.</p> <p><i>TSO 1b.</i> Differentiate between panel style line and dart equivalents.</p> <p><i>TSO 1c.</i> Describe the process of preparing the pattern of classic princess styleline using a basic bodice sloper.</p> <p><i>TSO 1d.</i> Describe the process of preparing the pattern of armhole princess styleline using a basic bodice sloper.</p> <p><i>TSO 1e.</i> Describe the process of preparing the pattern of panel styleline using a basic bodice sloper.</p> <p><i>TSO 1f.</i> Describe the process of preparing the pattern of ruched bodice/ one piece.</p> <p><i>TSO 1g.</i> Describe the process of preparing pattern for twisted knot dress.</p> <p><i>TSO 1h.</i> Apply patterns for different stylelines, ruched and twisted knot dresses for the given sample.</p>	<p>Unit-1.0 Stylelines, Ruched and Twisted Knot Patterns</p> <p>1.1 Stylelines:</p> <ul style="list-style-type: none"> • Classic Princess Styleline • Armhole Princess Styleline • Panel Styleline and its variation <p>1.2 Ruched Pattern:</p> <ul style="list-style-type: none"> • Ruched Bodice • Ruched One Piece <p>1.3 Twisted Knot Pattern</p>	CO1
<p><i>TSO 2a.</i> Explain the given skirt sloper variation(s).</p> <p><i>TSO 2b.</i> Select the suitable skirt sloper variation for the given situation.</p> <p><i>TSO 2c.</i> Convert basic skirt sloper pattern to the given skirt pattern using appropriate manipulation technique for the given situation.</p>	<p>Unit-2.0 Adaption of Skirt Sloper to its Variation</p> <p>2.1 Basic Flared skirt</p> <p>2.2 Skirts with gathered waistline</p> <p>2.3 Gored skirt</p> <p>2.4 Pegged skirt</p> <p>2.5 Skirt with yoke</p> <p>2.6 Tiered skirt</p> <p>2.7 Pleated Skirt</p>	CO2
<p><i>TSO3.1</i> Differentiate the different various forms of basic trouser sloper.</p> <p><i>TSO3.2</i> Convert the given basic trouser sloper to appropriate pant pattern using suitable manipulation technique.</p>	<p>Unit-3.0 Pants /Trousers</p> <p>3.1 Flared trouser</p> <p>3.2 Shorts</p> <p>3.3 Plazzo Pants</p> <p>3.4 Cullottes</p>	CO3
<p><i>TSO 4a.</i> Explain the given strapless pattern(s).</p> <p><i>TSO 4b.</i> Draft the pattern for strapless princess top.</p> <p><i>TSO 4c.</i> Draft the pattern for bra top torso.</p> <p><i>TSO 4d.</i> Draft the pattern for corselet.</p>	<p>Unit-4.0 Strapless Patterns</p> <p>4.1 Strapless Princess Bodice</p> <p>4.2 Bra Top Torso</p> <p>4.3 Corselet</p>	CO4
<p><i>TSO 5a.</i> Define the term Pattern Grading.</p> <p><i>TSO 5b.</i> Write the importance of pattern grading in apparel manufacturing industry.</p>	<p>Unit-5.0 Pattern Grading</p> <p>5.1 Definition of pattern grading</p>	CO5

Major Theory Session Outcomes (TSOs)	Units	Relevant Cos Number(s)
<p><i>TSO 5c.</i> Explain the given grading terminology(ies).</p> <p><i>TSO 5d.</i> Enlist the cardinal points of bodice and trouser slopers.</p> <p><i>TSO 5e.</i> Explain the given technique(s) of grading.</p> <p><i>TSO 5f.</i> Explain the given method used for manual pattern grading.</p> <p><i>TSO 5g.</i> Write the advantages and disadvantages of pattern shifting method.</p> <p><i>TSO 5h.</i> Write the advantages and disadvantages of Computer Aided Grading.</p>	<p>5.2 Grading terminology:</p> <ul style="list-style-type: none"> • Grade • Grading • Cardinal points • Base Pattern • Trueing • Size run • Cut & Spread / Cut & Overlap • Pattern Shifting • Suppression grading • Balance • Nested Grading <p>5.3 Grading techniques:</p> <ul style="list-style-type: none"> • Manual Pattern Grading : Cut and spread method, Pattern shifting method • Computer Aided Grading 	

Note: One major TSO may require more than one Theory session/Period.

K) Suggested Laboratory (Practical) Session Outcomes (LSOs) and List of Practical: P2451302

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant Cos Number(s)
<p><i>LSO 1.1.</i> Identify the given stylelines.</p> <p><i>LSO 1.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 1.3.</i> Manipulate basic bodice sloper to prepare the pattern of given stylelines.</p>	1.	<p>Prepare pattern for given stylelines:</p> <ul style="list-style-type: none"> • Classic Princess Styleline • Armhole Princess Styleline • Panel Styleline and its variation 	CO1
<p><i>LSO 2.1.</i> Identify the given ruched bodice/ one piece.</p> <p><i>LSO 2.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 2.3.</i> Manipulate basic bodice sloper to prepare the ruched pattern.</p>	2.	Prepare pattern for ruched bodice/ one piece.	CO1
<p><i>LSO 3.1.</i> Identify the given twisted knot pattern.</p> <p><i>LSO 3.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 3.3.</i> Manipulate basic bodice sloper to prepare the twisted knot pattern.</p>	3.	Draft twisted knot pattern.	CO1
<p><i>LSO 4.1.</i> Identify the given skirt pattern.</p> <p><i>LSO 4.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 4.3.</i> Manipulate the basic skirt sloper to prepare the given skirt pattern.</p>	4.	<p>Draft the given skirt pattern:</p> <ul style="list-style-type: none"> • Basic Flared skirt • Skirts with gathered waistline • Gored skirt • Pegged skirt • Skirt with yoke • Tiered skirt • Pleated Skirt 	CO2

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant Cos Number(s)
<p><i>LSO 5.1.</i> Identify the given type of trouser.</p> <p><i>LSO 5.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 5.3.</i> Use the basic trouser sloper to prepare the pattern of given trouser variations.</p>	5.	Prepare the pattern of following: <ul style="list-style-type: none"> • Flared Trouser • Shorts • Plazzo Pants • Cullottes 	CO3
<p><i>LSO 6.1.</i> Identify the given type of strapless design.</p> <p><i>LSO 6.2.</i> Use the appropriate pattern making tools for the given sample.</p> <p><i>LSO 6.3.</i> Manipulate the given basic bodice sloper to prepare the pattern of given strapless designs.</p>	6.	Prepare the pattern of following strapless designs: <ul style="list-style-type: none"> • Strapless bodice • Bra Top Torso • Corselet 	CO4
<p><i>LSO 7.1.</i> Use the techniques of manual pattern grading to increase/ decrease the pattern size.</p>	7.	Grade the given pattern manually using appropriate method.	CO5
<p><i>LSO 8.1.</i> Use CAD software to grade the given pattern.</p>	8.	Grade the given pattern using CAD software.	CO5

L) Suggested Term Work and Self Learning: S2451302 Some sample suggested assignments, micro project and other activities are mentioned here for reference.

a. Assignments: Prepare a portfolio file of patterns mentioned in Unit 1, 2,3,4,5.

b. Micro Projects:

1. Create a variation of twisted knot pattern for sustainable fabrics.
2. Develop a new pattern of skirt (other than mentioned in Unit 3)
3. Design a trouser using biodegradable fabrics.
4. Compare any pattern styles with ancient Indian forms.

c. Other Activities:

1. Seminar Topics:
 - Pattern Grading Using CAD.
 - Compare the Indigenous pattern styles with the world practices.
2. Visits: Visit to nearby apparel manufacturing unit to explore the industrial methods of pattern making. Prepare as report as per the prescribed format.

M) Suggested Course Evaluation Matrix: The course teacher has to decide and use appropriate assessment strategy and its weightage in theory, laboratory and Term Work for ensuring CO attainment. The response/performance of each student in each of these designed activities is to be used to calculate **CO attainment**.

Cos	Course Evaluation Matrix						
	Theory Assessment (TA)**		Term Work Assessment (TWA)			Lab Assessment (LA)#	
	Progressive Theory Assessment (PTA) Class/Mid Sem Test	End Theory Assessment (ETA)	Term Work & Self Learning Assessment			Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)
			Assignments	Micro Projects	Other Activities*		
CO-1	12%	12%	12%	20%	20%	30%	20%
CO-2	30%	30%	30%	20%	20%	15%	20%
CO-3	20%	20%	20%	20%	20%	15%	20%
CO-4	30%	30%	30%	20%	20%	15%	20%
CO-5	8%	8%	8%	20%	20%	25%	20%
Total Marks	30	70	20	20	10	20	30
			50				

Legend:

*: Other Activities include self- learning, seminar, visits, surveys, product development, software development etc.

** : Mentioned under point- (N)

: Mentioned under point-(O)

Note:

- The percentage given are approximate
- In case of Micro Projects and End Laboratory Assessment (ELA), the achieved marks will be equally divided in all those Cos mapped with total experiments.
- For CO attainment calculation indirect assessment tools like course exit survey need to be used which comprises of questions related to achievement of each Cos?

N) Suggested Specification Table for End Semester Theory Assessment: Specification table represents the reflection of sample representation of assessment of cognitive domain of full course.

Unit Title and Number	Total Classroom Instruction (CI) Hours	Relevant Cos Number(s)	Total Marks	ETA (Marks)		
				Remember ®	Understanding (U)	Application & above (A)
Unit-1.0 Stylelines, Ruched and Twisted Knot Patterns	8	CO1	10	2	3	5
Unit-2.0 Adoption of Skirt Sloper to its Variation	12	CO2	20	6	5	9
Unit-3.0 Adoption of Trouser Sloper to its Variation	10	CO3	14	4	4	6
Unit-4.0 Strapless Patterns	12	CO4	20	6	5	9
Unit-5.0 Pattern Grading	6	CO5	6	2	2	2
Total	48	-	70	20	19	31

Note: Similar table can also be used to design class/mid-term/ internal question paper for progressive assessment.

O) Suggested Assessment Table for Laboratory (Practical):

S. No.	Laboratory Practical Titles	Relevant Cos Number(s)	PLA/ELA		
			Performance		Viva-Voce (%)
			PRA* (%)	PDA** (%)	
1.	Prepare pattern for given stylelines: <ul style="list-style-type: none"> • Classic Princess Styleline • Armhole Princess Styleline • Panel Styleline and its variation 	CO1	30	60	10
2.	Prepare pattern for ruched bodice/ one piece.	CO1	40	50	10
3.	Draft twisted knot pattern.	CO1	50	40	10
4.	Draft the given skirt pattern: <ul style="list-style-type: none"> • Basic Flared skirt • Skirts with gathered waistline • Gored skirt • Pegged skirt • Skirt with yoke • Tiered skirt • Pleated Skirt 	CO2	50	40	10
5.	Prepare the pattern of following: <ul style="list-style-type: none"> • Flared Trouser • Shorts • Plazzo Pants • Cullottes 	CO3	50	40	10
6.	Grade the given pattern manually using appropriate method.	CO5	50	40	10
7.	Grade the given pattern using CAD software.	CO5	50	40	10

Legend:

PRA*: Process Assessment

PDA**: Product Assessment

Note: This table can be used for both end semester as well as progressive assessment of practical. Rubrics need to be prepared by the course teacher for each experiment/practical to assess the student performance.

P) Suggested Instructional/Implementation Strategies: Different Instructional/ Implementation Strategies may be appropriately selected, as per the requirement of the content/outcome. Some of them are Improved Lecture, Tutorial, Case Method, Group Discussion, Industrial visits, Industrial Training, Field Trips, Portfolio Based, Learning, Role Play, Live Demonstrations in Classrooms, Lab, Field Information and Communications Technology (ICT)Based Teaching Learning, Blended or flipped mode, Brainstorming, Expert Session, Video Clippings, Use of Open Educational Resources (OER), MOOCs etc.

Q) List of Major Laboratory Equipment, Tools and Software:

S. No.	Name of Equipment & Tools	Broad Specifications	Relevant Experiment/Practical Number
1.	Pattern cutting table	Height- 3 feet, Size- 2400X1200X900MM	All
2.	Pattern Maker Fashion Designing Ruler and Multi Purpose Marking Curve	43X19cm, Thickness- 3mm	All
3.	French Curve with cm markings	--	All
4.	24 " Hip Curve Ruler	Dimensions- 600 x 40 x 5 mm Graduation Range 0-24 Inches	5
5.	Leg Curve Ruler	Dimensions – 750 x 40 x 5 mm, Graduation Range 0-30 Inches	5
6.	L Scale	14X24 inches	1, 2, 3, 4, 5, 6
7.	Tailor's Scissors	11" anti rust stainless steel scissors with alloy steel blade material	All
8.	Measuring Tape	60 inches long	All
9.	Pattern Paper/ Brown Paper		All

R) Suggested Learning Resources:**(a) Books:**

S. No.	Titles	Author(s)	Publisher and Edition with ISBN
1.	Pattern Making For Fashion Design	Helen Joseph Armstrong	Pearson, 2014, Fifth edition ISBN: 978-93-325-1811-7
2.	Basic Pattern Making In Fashion	Lucia Mors	Taschen, 2009 ISBN: 3836517213, 978-3836517218
3.	Principles of Flat Pattern Design	Nora M. Mac Donald	Fairchild Publications, 4 th Edition, 2019 ISBN: 9781501353529
4.	Patternmaking: A Comprehensive Reference for Fashion Design	Sylvia Rosen	Pearson, 2004 ISBN: 978-0130262431
5.	Pattern Making by the Flat Pattern Method	Norma. R. Hollen, Carolyn. J. Kundel	Pearson, 8 th edition, 1998 ISBN: 978-0139380938
6.	Concepts of Pattern Grading	Kathy K Mullet	Bloomsberry Publishing 9781501312823

(b) Online Educational Resources:

1. www.fiber2fashion.com
2. www.onlineclothingstudy.com
3. <https://www.youtube.com/watch?v=PNJPumNwysw>
4. <https://www.youtube.com/watch?v=zCm4hkGBMZo>
5. <https://www.youtube.com/watch?v=7RcNC6JN0rU>
6. https://www.youtube.com/watch?v=V_0qYvi4aEk
7. <https://www.youtube.com/watch?v=M6HwZNV0RQI>
8. <https://www.youtube.com/watch?v=pYTa-K2kLDs>
9. <https://www.youtube.com/watch?v=pYTa-K2kLDs>

Note: Teachers are requested to check the creative commons license status/ financial implications of the suggested, online educational resources before use by the students.

- A) **Course Code** : 2451303(T2451303/P2451303/S2451303)
 B) **Course Title** : Indian & World Costumes
 C) **Pre- requisite Course(s)** :
 D) **Rationale** :

Culture plays an essential role in the fashion industry. Fashion is an expression of culture. Culture and fashion are inextricably linked to one another. Fashion is a means by which we can express ourselves through the clothing and accessories that we choose to wear. Knowing our roots and other cultures will help students adapt, extend and innovate fashion to suit specific cultures and ethnicities. When fashion students create new garments following those styles, they can easily touch peoples' heart who appreciate timeless pieces. Therefore, fashion students need to know the history of each specific costume and era. The course builds the skills of assessment of styles and trends, deep study of traditional costumes and find innovative ideas that make them unique.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/laboratory/workshop/field/ industry.

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

- CO-1** Apply terminology for clothing and accessories in history for Indian states and other countries of the world to describe design ideas.
CO-2 Illustrate draping styles of costumes of other countries and Indian states.
CO-3 Apply motifs, styles and accessories to create specified contemporary garment designs.
CO-4 Create styles inspired from other countries of the world and Indian states.
CO-5 Relate the effect of Indian and Western costumes on current fashion.

- F) **Suggested Course Articulation Matrix (CAM):**

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2
CO-1	3	2	2	-	2	-	2		
CO-2	3	1	2	1	3	1	3		
CO-3	3	3	3	3	3	1	3		
CO-4	3	3	3	3	3	1	3		
CO-5	3	3	3	-	3	1	3		

Legend: High (3), Medium (2), Low (1) and No mapping (-)

*PSOs will be developed by respective programme coordinator at institute level. As per latest NBA guidelines, formulating PSOs is optional

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	Total Credits (C)
			L	T				
FCT	2451303	Indian & World Costume	03	-	04	02	09	06

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

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C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

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FCT	2451303	Indian & World Costume	30	70	20	30	20	30	200

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

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Note:

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J) **Theory Session Outcomes (TSOs) and Units: T2451303**

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 1a.</i> Identify the features of ancient Greek culture</p> <p><i>TSO 1b.</i> Compare the features of men's and women's clothing of Greece.</p> <p><i>TSO 1c.</i> State the terms Peplos, chiton and himation</p> <p><i>TSO 1d.</i> Identify the features of Roman culture</p> <p><i>TSO 1e.</i> Compare the features of men's and women's clothing of Rome.</p> <p><i>TSO 1f.</i> Sketch the wearing method of Toga</p> <p><i>TSO 1g.</i> State the terms exomis, tunic, palla</p> <p><i>TSO 1h.</i> State the elements of Roman stola</p> <p><i>TSO 1i.</i> Compare the Greek and Roman costume culture</p> <p><i>TSO 1j.</i> Identify the significant features of Chinese culture.</p> <p><i>TSO 1k.</i> Describe Dragon robe with sketch.</p> <p><i>TSO 3a.</i> Compare Dragon Robe with Mandarin Robe.</p> <p><i>TSO 1l.</i> Compare Dragon Robe with Mandarin Robe.</p> <p><i>TSO 1m.</i> Explain the modern day dress of China.</p> <p><i>TSO 1n.</i> Draw the sketch of Cheongsam</p> <p><i>TSO 1o.</i> Outline the Costume culture of Japan.</p> <p><i>TSO 1p.</i> List out types of kimono worn in Japan.</p> <p><i>TSO 1q.</i> Describe the features of Junihitoe</p> <p><i>TSO 1r.</i> Differentiate between kosode and furisode.</p> <p><i>TSO 1s.</i> Explain Japanese bridal attire.</p> <p><i>TSO 1t.</i> Compare Chinese costume with Japanese costume.</p> <p><i>TSO 1u.</i> State the importance of under clothes for kimono.</p> <p><i>TSO 1v.</i> Mention the types of OBI with sketch.</p>	<p>Unit-1.0 Ancient Costumes of Foreign Countries</p> <ul style="list-style-type: none"> • Greece and Rome <p>1.1 Introduction to Greek and Roman culture</p> <p>1.2 Women's clothing- Features of Peplos, Chiton, Himation</p> <p>1.3 Men's clothing-Features of men's Chiton, Exomis, Chlamys.</p> <p>1.4 Women's clothing- Features of Tunic, Stola, Palla, Paenula</p> <p>1.5 Men's clothing-Features of men's Tunic and Toga</p> <p>1.6 Accessories-Headgears, Footwear ,jewellery of Greece and Rome</p> <ul style="list-style-type: none"> • Eastern countries-China and Japan <p>1.7 Introduction to Chinese & Japanese culture</p> <p>1.8 Knowledge of certain myths and symbol-The Phoenix, The Dragon, The Unicorn</p> <p>1.9 The costume of Manchu men and women- Dragon robe, Mandarin garments.</p> <p>1.10 Modern day dress-The Cheongsam</p> <p>1.11 Garments worn by royalty and common man's attire.</p> <p>1.12 Kimono as worn in its different forms- Junihitoe, Kosode, Furisode (Kimono as worn by samurai), Koshi-moki, Japanese bridal attire.</p> <p>1.13 Knowledge of underclothes for creating the smooth foundation of kimono Hadajuban, Susoyoke, Knowledge of OBI or sash and Haori coat.</p>	<p>CO1&CO3</p>

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 2a.</i> Explain the characteristics of Renaissance Age.</p> <p><i>TSO 2b.</i> Identify the distinguishing features of farthingale.</p> <p><i>TSO 2c.</i> Define the terms partlet, chamarre, stomacher.</p> <p><i>TSO 2d.</i> Compare the men's and women's clothing of Renaissance /Modern Age.</p> <p><i>TSO 2e.</i> Identify the head-dress and footwear of modern age</p> <p><i>TSO 2f.</i> Compare the features of Farthingale and Panier.</p> <p><i>TSO 2g.</i> Identify the terms Crinoline, Caraco, Redingote, Canezou, Carrick, Spencer, Gilet.</p> <p><i>TSO 2h.</i> Describe the features of Neo-Rococo and Victorian Era.</p>	<p>Unit-2.0 Era Studies-Modern Age, Neo-Classism</p> <p>2.1 Characteristics of Renaissance/Modern Age.(1500 to 1640)</p> <p>2.2 Women's clothing during Reformation- Partlet, Chamarre, Stomacher, Farthingale,</p> <p>2.3 Men's clothing during Reformation-Doublet, Breeches, Codpiece, Trunk hose</p> <p>2.4 Accessories,-Biretta, Toque, Duckbill shoe, Horn shoe, Chopines and jewellery</p> <p>2.5 Characteristics of Rococo/Modern Age.(1720 to 1785)</p> <p>2.6 Women's clothing-Hoop skirt, Panier, Bustle</p> <p>2.7 Men's clothing- Justaucorps, Vest, Culottes</p> <p>2.8 Accessories-lace head-dress, Tricorn, stiletto shoe, Buckled shoe</p> <p>2.9 Characteristics of Neo-Rococo and the Victorian Era (1850 to 1890)</p> <p>2.10 Women's clothing-Crinoline, Caraco, Redingote, Fichu, Chemise, Canezou,</p> <p>2.11 Men's clothing- Frock coat, Tail coat, Pantaloons, Carrick, Paletot, Spencer, Gilet</p>	<p>CO1&CO3</p>
<p><i>TSO 3b.</i> State the terms Khes, Tehmed</p> <p><i>TSO 3c.</i> Identify the costumes of Kashmir region</p> <p><i>TSO 3d.</i> List out the ornaments of Kashmiri people.</p> <p><i>TSO 3e.</i> Compare the costumes of rural and urban men of Punjab</p> <p><i>TSO 3f.</i> Explain the women's costume of Punjab</p> <p><i>TSO 3g.</i> Name the men's and women's costume of Rajasthan.</p> <p><i>TSO 3h.</i> Compare the men's and women's costume of Rajasthan.</p> <p><i>TSO 3i.</i> Identify the ornaments of Rajasthan</p> <p><i>TSO 3j.</i> Compare the costume culture of Kashmir and Punjab.</p> <p><i>TSO 3k.</i> Compare the men's costume of Bengal and Orissa</p> <p><i>TSO 3l.</i> Explain the draping style of Bengali sari.</p> <p><i>TSO 3m.</i> State the headdresses of Bengal and Orissa</p> <p><i>TSO 3n.</i> Describe the traditional costume of Assam</p> <p><i>TSO 3o.</i> State the term Mekhla and Chador.</p> <p><i>TSO 3p.</i> Identify the names of Ornaments worn in Bengal and Orissa</p> <p><i>TSO 3q.</i> Name the ornaments of Assam.</p>	<p>Unit-3.0 Indian Costumes-Northern and Eastern Region (Including Tribal)</p> <p>3.1 Kashmir-Costume of Men and Women-Pehran, Salwar, Chadar, Skull-cap, Study of ornaments.</p> <p>3.2 Punjab-Costume of rural men, Urban men- Khes, Tehmed, Kurta, Pajama, Sherwani, Chudidar, Turban.</p> <p>3.3 Costume of Rural Women & Urban Women- Salwar, Kameez, Orhani, Chudidar, Ghagra, Kurti, Study of Draping of Dupatta. Study of Ornaments.</p> <p>3.4 Rajasthan-Costume of Rajasthani men-Dhoti, Bandia-Angarkha, Potia, Achakan, Jodhpur, Breeches, Picharanga Pagdi, Kamarband. Costume of women- Ghgra-Choli, Orhani. Study of Ornaments.</p> <p>3.5 Bengal and Orissa- Costumes of Men and Women- Dhoti, kurta, Scarf (uttorio), Headdress-Chadar. Women's costume- Bengali Sari</p> <p>3.6 Assam- Costumes of Men and Women-Dhoti, Mekhla, blouse and chador, Study of Ornaments.</p> <p>3.7 Tribal wear</p>	<p>CO1 & CO3</p>

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 4a.</i> Identify the characteristics of Southern and Western Region Costumes</p> <p><i>TSO 4b.</i> Illustrate the features of Gujrati men's costume</p> <p><i>TSO 4c.</i> Explain the key features of Women's costume</p> <p><i>TSO 4d.</i> Identify the names of Gujrati ornaments.</p> <p><i>TSO 4e.</i> Enlist the men's and women's costumes of Maharashtra.</p> <p><i>TSO 4f.</i> Explain the draping style of Sakachcha-Nesana and Gol Nesana</p> <p><i>TSO 4g.</i> Identify the names of Maharashtra ornaments.</p> <p><i>TSO 4h.</i> Explain the Man's and Women's costume of Karnataka</p> <p><i>TSO 4i.</i> Identify the names of Karnataka ornaments</p>	<p>Unit-4.0 Indian Costumes-Southern and Western Region Including Tribal)</p> <p>4.1 Gujrat-Costume of Men-Dhotiyu/ BadanaPotadi/ Paheran/ Jabboh/ Paghadi/ Kediya</p> <p>4.2 Study of Women's costume-Chaniya-Choli, Orhani, Kancholi.</p> <p>4.3 Study of Ornaments</p> <p>4.4 Maharashtra- Study of Men's Costume-Dhoti, Sadra, Ganjipharak, Bandi, Pheta</p> <p>4.5 Study of Women's costume- Sari Drape-Sakachcha – Nesana & Gol Nesana & Choli</p> <p>4.6 Study of Ornaments</p> <p>4.7 Karnataka-Dhotra, Shalya, Turban, Kuppasasari draping-Coorg saree.</p> <p>4.8 Costume of Women: Ghagra – Choli, Orhani, Study of accessories &Ornaments</p> <p>4.9 Tribal wear</p>	CO1 &CO3
<p><i>TSO 5a.</i> Illustrate a draping style influenced by of ancient Greek and Roman costumes</p> <p><i>TSO 5b.</i> Illustrate a draping style influenced by ancient Greek and Roman costumes.</p> <p><i>TSO 5c.</i> Illustrate a draping style influenced by Chinese and Japanese costumes</p> <p><i>TSO 5d.</i> Illustrate draping styles influenced by tribal costumes of India</p> <p><i>TSO 5e.</i> Identify factors affecting current trends in fashion</p> <p><i>TSO 5f.</i> Analyze the current trends of fashion</p> <p><i>TSO 5g.</i> Discuss the impact of Western and traditional Indian culture on dresses.</p>	<p>Unit-5.0 Influence of Costumes of Western Countries and Indian States on Fashion.</p> <p>5.1 Draping style of ancient Greek, Roman, Chinese and Japanese costumes.</p> <p>5.2 Draping style of Indian states like Kashmir, Punjab, Rajasthan, Gujrat, Maharashtra and Karnataka.</p> <p>5.3 Factors affecting fashion trends.</p> <p>5.4 Current trends in Western and Indian costumes.</p> <p>5.5 Influence of Gothic, Chinese, Japanese, Roman dressing style on fashion.</p> <p>5.6 Influence of Elizabethan Fashion on the Modern- Day fashion World.</p> <p>5.7 Influence of Indian culture on Global fashion</p>	CO2 & CO5

Note: One major TSO may require more than one Theory session/Period.

K) Suggested Laboratory (Practical) Session Outcomes (LSOs) and List of Practical: P2451303

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<p><i>LSO 1.1.</i> Use Dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 1.2.</i> Select fabric like wool/linen/silk or cotton according to required draping quality for given garment.</p> <p><i>LSO 1.3.</i> Use silk pins, girdles/ belt, hand needle and thread for tacking. Use trimming for decoration.</p> <p><i>LSO 1.4.</i> Prepare Dress-form (Dummy) for Draping style for various Greek costume.</p>	1.	<p>Drape on the Dress form (Dummy) the Draping style of Ancient Greek costume like:</p> <ul style="list-style-type: none"> • Peplos (01hr) • Chiton (Men & Women) (02 hours) • Himation(01hr) • Exomis (01hr) • Chalmys (01hr) 	CO2
<p><i>LSO 2.1.</i> Prepare Dress-form (Dummy) or on live model create draping style inspired from Greek costume.</p> <p><i>LSO 2.2.</i> Select fabric like wool/linen/silk or cotton according to required draping quality for given garment</p>	2.	<p>Create any two styles inspired from above Greek costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO4
<p><i>LSO 3.1.</i> Use Dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 3.2.</i> Select fabric like wool/linen/silk or cotton according to required draping quality for given garment</p> <p><i>LSO 3.3</i> Prepare Dress form (Dummy) for Draping style for various Roman costume.</p>	3.	<p>Drape on the Dress form (Dummy) the Draping style of Ancient Roman costume like:</p> <ul style="list-style-type: none"> • Toga (01hr) • Tunic (Men & Women) (02 hours) • Stola (01hr) • Palla (01hr) 	CO2
<p><i>LSO 4.1</i> Prepare the Dress-form (Dummy) or on live model create draping style inspired from Roman costume.</p> <p><i>LSO 4.2</i> Select fabric like wool/linen/silk or cotton according to required draping quality for given garment</p>	4.	<p>Create any two styles inspired from above Roman costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO4
<p><i>LSO 5.1.</i> Use Dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 5.2.</i> Select fabric like silk/satin or cotton according to required draping quality for given garment.</p> <p><i>LSO 5.3.</i> Prepare the dress form or on live model create draping style inspired from China and Japan costume.</p>	5.	<p>Create any two styles inspired from China and Japan costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO3, CO4, CO5
<p><i>LSO 6.1.</i> Use dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 6.2.</i> Select fabric and elements as per the Era's specified for costume design</p> <p><i>LSO 6.3.</i> Prepare dress form or on live model create styles inspired from given Era's.</p>	6.	<p>Create styles inspired from following Era's</p> <ul style="list-style-type: none"> • Renaissance period • Rococo period • Neo-Rococo and the Victorian Era • Prepare the dress form or on live model present the created styles along with presentation. (04hr) 	CO4, CO5
<p><i>LSO 7.1.</i> Use dress form (Dummy) of size 8/10/12.</p>	7.	<p>Drape on the Dress form (Dummy) with the traditional Draping style of:</p> <ul style="list-style-type: none"> • Kashmir(01hr) • Punjab (Men & Women) (01 hours) 	CO2

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<p><i>LSO 7.2.</i> Select fabric/costumes and elements as per the specified Indian states such as Kashmir, Punjab Rajasthan, Bengal, Orissa, Assam</p> <p><i>LSO 7.3.</i> Prepare dress form with draping style of given Indian states.</p>		<ul style="list-style-type: none"> • Rajasthan(01hr) • Bengal/Orissa/Assam (01hr) 	
<p><i>LSO 8.1.</i> Use dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 8.2.</i> Select fabric/costumes and elements as per the Indian states mentioned such as Kashmir, Punjab Rajasthan, Bengal, Orissa, Assam</p> <p><i>LSO 8.3.</i> Prepare dress form or on live model create styles inspired from given Indian states.</p>	8.	<p>Create any Three styles inspired from Kashmir, Punjab and Rajasthan, Bengal/ Orissa/ Assam costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the Four created styles along with presentation. (04hr) 	CO4, CO5
<p><i>LSO 9.1.</i> Use dress form (Dummy)of size 8/10/12.</p> <p><i>LSO 9.2.</i> Select fabric/costumes and elements as per the Indian states such as Gujarat, Maharashtra, karnataka</p> <p><i>LSO 9.3.</i> Prepare dress with draping style of given Indian states.</p>	9.	<p>Drape on the Dress form (Dummy) with the traditional Draping style of:</p> <ul style="list-style-type: none"> • Gujarat(01hr) • Maharashtra (Men & Women) (02 hours) • Karnataka (01hr) 	CO2
<p><i>LSO 10.1.</i> Use dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 10.2.</i> Select fabric /costumes and elements as per the Indian states mentioned such as Gujarat, Maharashtra, karnataka</p> <p><i>LSO 10.3.</i> Prepare dress form or on live model create styles inspired from given Indian states.</p>	10.	<p>Create any Three styles inspired from Gujrat, Maharashtra and Karnataka costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the three created styles along with presentation. (04hr) 	CO4
<p><i>LSO 11.1.</i> Use dress form (Dummy) of size 8/10/12.</p> <p><i>LSO 11.2.</i> Select fabric/costumes/draping style as per current trend</p> <p><i>LSO 11.3.</i> Prepare dress form or on live model with two current trends inspired from Indian as well as Western costume.</p>	11.	<p>Analyze any Two current trends inspired from Indian and Western costume.</p> <ul style="list-style-type: none"> • Prepare the dress form or on live model present the two current trends inspired from Indian and Western costumes along with presentation. (04hr) 	CO4, CO5

L) **Suggested Term Work and Self- Learning: S2451303** Some sample suggested assignments, micro project and other activities are mentioned here for reference.

a. **Assignments:** Questions/Problems/Numerical/Exercises to be provided by the course teacher in line with the targeted COs. Some examples are-

1. Prepare two accessories like headdress/purses/jewelry inspired from the above- mentioned countries/Indian states. (CO3)
2. Illustrate stylized motifs inspired from above mentioned countries/Indian states. (CO3)
3. Watch any two historical Indian movies /TV serials/ Theatre Show critically and carefully based on costume. Prepare a report and write details of costumes.

b. Micro Projects:

1. In-house Fashion show:- Execute a fashion show based on contemporary draping styles inspired from Indian as well as Western costumes.
2. Window Display:- Prepare a window display on traditional Indian State costumes and present in groups.
3. Theme based Display:- Collect photos of professional window display based on traditional themes/Indian culture/Special occasions from local market.
4. Prepare albums of Tribal dresses of Indian states, and illustrate two designs inspired by tribal costume (One men's wear, and One women's Wear)
5. Prepare a scrap book Ancient Indian and Western costume photos/ illustrations and one innovative design inspired from the pictures.

c. Other Activities:

1. Seminar Topics: (suggested)
 - Fashion Trends in India in different age groups
 - Indian historical costumes and their special features
 - Analysis of costumes used in historical movies
 - Climate and its effect on fashion trends
 - Formal and informal wears in IWC
 - Renowned designers and their work
2. Visits: Visit nearby Historical Museums /weaving centers/Craft Exhibitions to observe traditional costumes samples. Prepare report of visit with special features of these costumes, crafts and embroidery samples.
3. Self-learning topics:
 - Importance of traditional ancient costume knowledge for fashion designer.
 - Portfolios of famous designers

M) Suggested Course Evaluation Matrix: The course teacher has to decide and use appropriate assessment strategy and its weightage in theory, laboratory and Term Work for ensuring CO attainment. The response/performance of each student in each of these designed activities is to be used to calculate **CO attainment**.

COs	Course Evaluation Matrix						
	Theory Assessment (TA)**		Term Work Assessment (TWA)			Lab Assessment (LA)#	
	Progressive Theory Assessment (PTA) Class/Mid Sem Test	End Theory Assessment (ETA)	Term Work & Self Learning Assessment			Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)
Assignments			Micro Projects	Other Activities*			
CO-1	15%	15%	---	15%	10%	20%	20%
CO-2	10%	10%	10%	25%	-	10%	20%
CO-3	15%	15%	15%	25%	33%	15%	20%
CO-4	30%	30%	---	30%	15%	10%	40%
CO-5	30%	30%	30%	25%	34%	20%	25%
Total Marks	30	70	20	20	10	20	30
			50				

Legend:

*: Other Activities include self- learning, seminar, visits, surveys, product development, software development etc.

**: Mentioned under point- (N)

#: Mentioned under point-(O)

Note:

- The percentage given are approximate
- In case of Micro Projects and End Laboratory Assessment (ELA), the achieved marks will be equally divided in all those COs mapped with total experiments.
- For CO attainment calculation indirect assessment tools like course exit survey need to be used which comprises of questions related to achievement of each COs.

N) Suggested Specification Table for End Semester Theory Assessment: Specification table represents the reflection of sample representation of assessment of cognitive domain of full course.

Unit Title and Number	Total Classroom Instruction (CI) Hours	Relevant COs Number (s)	Total Marks	ETA (Marks)		
				Remember (R)	Understanding (U)	Application & above (A)
Unit-1.0 Ancient Costumes of Foreign Countries	9	CO1& CO2	15	4	6	2
Unit-2.0 Era Studies-Modern Age, Neo-Classism	11	CO1, CO2	15	4	6	4
Unit-3.0 Indian Costumes-Northern and Eastern Region (Including Tribal)	11	CO1, CO4	15	5	4	6
Unit-4.0 Indian costumes- Southern and Western Region (Including Tribal)	11	CO1, CO4	15	5	4	6
Unit-5.0 Influence of Western Countries and Indian States Costume on Fashion.	08	CO4, CO5	10	2	2	6
Total	48	-	70	20	22	24

Note: Similar table can also be used to design class/mid-term/ internal question paper for progressive assessment.

O) Suggested Assessment Table for Laboratory (Practical):

S. No.	Laboratory Practical Titles	Relevant COs Number(s)	PLA/ELA		
			Performance		Viva-Voce (%)
			PRA* (%)	PDA** (%)	
1.	Drape on the Dress form (Dummy) the Draping style of Ancient Greek costume like: <ul style="list-style-type: none"> • Peplos (01hr) • Chiton (Men &Women) (02 hours) • Himation(01hr) • Exomis (01hr) 	CO2	30	60	10
2.	Create any two styles inspired from above Greek costume. <ul style="list-style-type: none"> • Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO4	30	60	10
3.	Drape on the Dress form (Dummy) the Draping style of Ancient Roman costume like: <ul style="list-style-type: none"> • Toga (01hr) • Tunic (Men &Women) (02 hours) • Stola (01hr) • Palla(01hr) 	CO2	40	50	10

S. No.	Laboratory Practical Titles	Relevant COs Number(s)	PLA/ELA		
			Performance		Viva-Voce (%)
			PRA* (%)	PDA** (%)	
4.	Create any two styles inspired from above Roman costume. <ul style="list-style-type: none"> Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO4, CO5	30	60	10
5.	Create any two styles inspired from China and Japan costume. <ul style="list-style-type: none"> Prepare the dress form or on live model present the two created styles along with presentation. (04hr) 	CO4, CO5	30	60	10
6.	Create styles inspired from following Era's <ul style="list-style-type: none"> Renaissance period Rococo period Neo-Rococo and the Victorian Era Prepare the dress form or on live model present the created styles along with presentation. (04hr) 	CO4, CO5	30	60	10
7.	Drape on the Dress form (Dummy) with the traditional Draping style of : <ul style="list-style-type: none"> Kashmir(01hr) Punjab (Men & Women) (01 hours) Rajasthan(01hr) Bengal/Orissa/Assam(01hr) 	CO2	40	50	10
8.	Create any Three styles inspired from Kashmir, Punjab and Rajasthan costume. <ul style="list-style-type: none"> Prepare the dress form or on live model present the created styles along with presentation. (04hr) 	CO4, CO5	30	60	10
9.	Drape on the Dress form (Dummy) with the traditional Draping style of: <ul style="list-style-type: none"> Gujrat(01hr) Maharashtra (Men & Women) (02 hours) Karnataka (01hr) 	CO4, CO5	40	50	10
10.	Create any Three styles inspired from Gujrat, Maharashtra and Karnataka costume. <ul style="list-style-type: none"> Prepare the dress form or on live model present the three created styles along with presentation. (04hr) 	CO4, CO5	30	60	10
11.	Analyze any Two current trends inspired from Indian and Western costume. <ul style="list-style-type: none"> Prepare the dress form or on live model present the two current trends inspired from Indian and Western costumes along with presentation. (04hr) 	CO5	30	60	10

Legend:

PRA*: Process Assessment

PDA**: Product Assessment

Note: This table can be used for both end semester as well as progressive assessment of practical. Rubrics need to be prepared by the course teacher for each experiment/practical to assess the student performance.

P) Suggested Instructional/Implementation Strategies: Different Instructional/ Implementation Strategies may be appropriately selected, as per the requirement of the content/outcome. Some of them are Improved Lecture, Tutorial, Case Method, Group Discussion, Industrial visits, Industrial Training, Field Trips, Portfolio Based, Learning, Role Play, Live Demonstrations in Classrooms, Lab, Field Information and Communications Technology (ICT)Based Teaching Learning, Blended or flipped mode, Brainstorming, Expert Session, Video Clippings, Use of Open Educational Resources (OER), MOOCs etc.

Q) List of Major Laboratory Equipment, Tools and Software:

S. No.	Name of Equipment, Tools and Software	Broad Specifications	Relevant Experiment/Practical Number
1.	High end computers	Processor Intel Core i7 with Open GL Graphics Card, RAM 32 GB, DDR3/DDR4, HDD 500 GB, Graphics Card NVIDIA OpenGL 4 GB, OS Windows 10	All
2.	Dress Forms /Dummy	Ladies Dress Form of Size 8/10/12 L/M/XL	CO2, CO4, CO5

R) Suggested Learning Resources:**(a) Books:**

S. No.	Titles	Author(s)	Publisher and Edition with ISBN
1.	Indian Costumes	A. Biswas	ISBN:978-81-230-2498-1 A&C-ENG-REP-036-2017-18 Published by the Director General, Publications Division, Ministry of Information and Broadcasting, Government of India
2.	The Saree	Linda Lynton	Thames &Hudson LTD ISBN10:0500283788
3.	Costume & textile of Royal India	Ritu Kumar	Acc art books ISBN10:1851495096
4.	Clothing Technology-from fibre to fashion	H.Eberle, E.Gonser,, H.Hermeling, M.Hornberger, R.Kilgus, R.Kupke, D.Menzer, A.Moll, W.Ring	EUROPA LEHRMITTEL ISBN: 978-3-8085-6226-0
5	World dress	FrancessKennet	ISBN 1-85732-353-X
6	Dictionary of Fashion	CharlotteMankeyCalasi betta, philist Tortora	Om books International ISBN81-8710-739-1

(b) Online Educational Resources:

- <https://www.historymuseum.ca/cmce/exhibitions/civil/egypt/egcl06e.html>
- <https://www.ancient.eu/article/20/ancient-greek-clothing/>
- <https://www.chinahighlights.com/travelguide/traditional-chinese-clothes.htm>
- <http://www.facts-about-japan.com/clothing.html>
- <https://fashionhistory.fitnyc.edu/spanish-farthingale/>
- <https://www.youtube.com/watch?v=JOAPLLZW1v4>
- <https://www.youtube.com/watch?v=8J7wTGGRjC8>
- <https://www.youtube.com/watch?v=jorqok0ydidg>
- <https://www.youtube.com/watch?v=JUGjeHCJ7Pc>
- <https://www.youtube.com/watch?v=HbB1Z0CLXn0>

Note: Teachers are requested to check the creative commons license status/ financial implications of the suggested, online educational recourses before use by the students.

- A) **Course Code** : 2451304(T2451304/P2451304/S2451304)
 B) **Course Title** : Kid's Wear Garment Construction
 C) **Pre- requisite Course(s)** : Basics/ components of clothing construction
 D) **Rationale** :

Apparels are highly symbolic business segment due to its immense visibility. Kid's wear garment manufacturing includes design, pattern development, cutting, sewing, finishing, folding, and packing. This course on kid's wear garment construction will develop understanding of the process of making kid's wear in the students. It also covers the categories of kid's wear, industrial setup required, tools & equipment needed, the methodology and quality control of industrial production. This course provides students with the necessary knowledge and skills to design, create, and construct garments specifically tailored for children to cater for their unique requirements of kids' clothing, considering their varying sizes, proportions, and comfort needs. The course equips students with the specialized knowledge and skills needed to excel in designing and producing children's clothing, catering to the growing demand for safe, functional, and aesthetically pleasing kids' wear. The knowledge gained through this course will help the students to take up the job in industry or to setup their own industry and also take up courses like apparel merchandising and apparel marketing in higher semesters.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/ laboratory/ workshop/ field/ industry.

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

- CO-1** Analyze the development of the kid's wear market and their demand for skilled professionals.
CO-2 Prepare patterns of basic blocks for kid's garments.
CO-3 Construct different types of frocks and night dresses for kids as per the given measurements.
CO-4 Construct different types of skirts, tops, and tunics for kids as per the given measurements.
CO-5 Construct party wear dresses for kids as per the given measurements.

- F) **Suggested Course Articulation Matrix (CAM):**

Course Outcomes (COs)	Programme Outcomes(POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2
CO-1	3	1	-	-	-	-	1		
CO-2	3	-	3	3	-	-	1		
CO-3	3	-	3	3	-	-	1		
CO-4	3	-	2	3	-	-	1		
CO-5	3	-	2	3	-	-	1		

Legend: High (3), Medium (2), Low (1) and No mapping (-)

* PSOs will be developed by respective programme coordinator at institute level. As per latest NBA guidelines, formulating PSOs is optional

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	Total Credits (C)
			L	T				
FCT	2451304	Kid's Wear Garment Construction	03	-	04	02	09	06

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term Work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note: TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of teacher to ensure outcome of learning.

H) Assessment Scheme:

Board of Study	Course Code	Course Title	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
FCT	2451304	Kid's Wear Garment Construction	30	70	20	30	20	30	200

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self-learning, any other student activities etc.)

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
- Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done **internally (40%)** as well as **externally (60%)**. Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/presentation related to these activities will be carried out by external faculty/expert (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course. For valid and reliable assessment, the internal faculty should prepare checklist & rubrics for these activities.

I) **Course Curriculum Detailing:** This course curriculum detailing depicts learning outcomes at course level and session level and their attainment by the students through Classroom Instruction (CI), Laboratory Instruction (LI), Term Work (TW) and Self Learning (SL). Students are expected to demonstrate the attainment of Theory Session Outcomes (TSOs) and Lab Session Outcomes (LSOs) leading to attainment of Course Outcomes (COs) upon the completion of the course. While curriculum detailing, NEP 2020 related reforms like Green skills, Sustainability, Multidisciplinary aspects, Society connect, Indian Knowledge System (IKS) and others must be integrated appropriately.

J) **Theory Session Outcomes (TSOs) and Units: T2451304**

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 1a.</i> Explain the significance of the kid's wear market globally.</p> <p><i>TSO 1b.</i> Identify the Socio-psychological aspects associated with children's garments.</p> <p><i>TSO 1c.</i> Differentiate the process parameters for the given kid's garments according to given season, age and fashion.</p> <p><i>TSO 1d.</i> Identify the brands and their product range available in the market.</p> <p><i>TSO 1e.</i> Analyze the Indian Kids Wear brands and the special features associated with the brands.</p>	<p>Unit 1.0 Introduction to Kids Wear Garments.</p> <p>1.1 Significance of the kid's wear market globally.</p> <p>1.2 History & Socio-psychological aspects of children's garments.</p> <p>1.3 Need of kid's garments according to season, age and fashion.</p> <ul style="list-style-type: none"> ➤ Toddlers. ➤ Pre- school child. ➤ Nursery school child. ➤ Elementary school child ➤ Teenage <p>1.4 National and International Brands of Kid's Wear.</p> <p>Features and facilities provided by brands for kids' wear.</p>	CO1
<p><i>TSO 2a.</i> Explain the factors affecting the selection of children's garments according to age and fashion.</p> <p><i>TSO 2b.</i> Enlist the types of fabrics used for kid's wear.</p> <p><i>TSO 2c.</i> Enlist trimming, fasteners and accessories used in kid's garments construction.</p> <p><i>TSO 2d.</i> Identify the need and features of self-help garments.</p> <p><i>TSO 2e.</i> Design the given children's garment as per the given requirements, seasons, and festivals.</p> <p><i>TSO 2f.</i> Design the given Sleeve basic block pattern for the given sample.</p> <p><i>TSO 2g.</i> Design the given Skirt basic block pattern for the given sample.</p>	<p>Unit- 2.0 Kids Garments Designing.</p> <p>2.1 Design types of kids garments (mentioned in Unit 1) as per requirements, seasons, festivals, and age for children's garments.</p> <p>2.2 Design various basic block patterns of Sleeves, collars, skirts for kids garments.</p>	CO1, CO2
<p><i>TSO 3a.</i> Enlist the types of fabrics used for kid's frocks and night dresses.</p> <p><i>TSO 3b.</i> Identify the drafting, cutting and stitching parameters in frock construction</p> <p><i>TSO 3c.</i> Differentiate between different types of frocks.</p> <p><i>TSO 3d.</i> Design the given pattern of Sleeves for kids.</p> <p><i>TSO 3e.</i> Design the given pattern of Skirt for kids.</p>	<p>Unit-3.0 Frocks and Night Dress Construction.</p> <p>3.1 Drafting, cutting, and stitching of following types of frocks:</p> <ul style="list-style-type: none"> ➤ A-line frock, ➤ Easy frock, ➤ Umbrella frock. <p>3.2 Drafting, cutting, and stitching of night dress</p>	CO2, CO3
<p><i>TSO 4a.</i> Enlist the types of fabrics used for skirts, tops, and tunics for kids.</p> <p><i>TSO 4b.</i> List out the machinery and tools used in production of skirts, tops, and tunics.</p>	<p>Unit- 4.0 Skirts, Tops & Tunics Construction.</p> <p>4.1 Drafting, cutting, and stitching of following types of skirts:</p> <ul style="list-style-type: none"> ➤ Pleated skirt. 	CO2, CO4

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 4c.</i> Identify the drafting, cutting and stitching elements and parameters in skirt tops, and tunic construction.</p> <p><i>TSO 4d.</i> Differentiate between different types of skirts.</p> <p><i>TSO 4e.</i> Design pattern of a pleated, spiral, and layered skirt as per the given measurement.</p> <p><i>TSO 4f.</i> Design pattern of a top as per the given measurement.</p> <p><i>TSO 4g.</i> Design pattern of a tunic as per the given measurements.</p>	<p>➤ Spiral skirt.</p> <p>➤ Layered skirt.</p> <p>4.2 Drafting, cutting, and stitching of tops for skirts.</p> <p>4.3 Drafting, cutting, and stitching of tunic.</p>	
<p><i>TSO 5a.</i> Enlist the types of fabrics used in party wear dresses for kids.</p> <p><i>TSO 5b.</i> Identify the drafting, cutting and stitching factors in kids party wear costume construction.</p> <p><i>TSO 5c.</i> Draft pattern for kids party wear dresses as per the given measurements.</p>	<p>Unit-5.0 Kids Party Wear Dresses Construction.</p> <p>5.1 Designing, drafting, cutting, and stitching of party wear dresses for children.</p>	CO2, CO3, CO4, CO5

Note: One major TSO may require more than one Theory session/Period.

K) Suggested Laboratory (Practical) Session Outcomes (LSOs) and List of Practical: P2451304

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<p><i>LSO 1.1.</i> Use measuring tape and scales to take measurement of a kid.</p> <p><i>LSO 1.2.</i> Read standard measurements</p> <p><i>LSO 1.3.</i> Read the different brand size charts</p> <p><i>LSO 1.4.</i> Correlate the sizes and measurements as per standard charts.</p>	1.	Take measurements using direct method by measuring tape and scales and compare with the standard measurement charts.	CO2
<p><i>LSO 2.1.</i> Identify the elements, parameters, and tools for the given garment for toddlers, pre-school child and nursery school child.</p> <p><i>LSO 2.2.</i> Prepare sketch of the given garment for toddlers, pre-school child and nursery school child.</p> <p><i>LSO 2.3.</i> Design the garment for the given situation.</p>	2.	Design and prepare sketches of garments for- <ul style="list-style-type: none"> • Toddlers. • Pre- school child. • Nursery school child. 	CO2
<p><i>LSO 3.1.</i> Identify the elements, parameters, and tools for the given garment for elementary school child and teen-age child.</p> <p><i>LSO 3.2.</i> Prepare sketch of the given garment for elementary school child and teen-age child.</p> <p><i>LSO 3.3.</i> Design the garment for the given elementary school child and teen-age child.</p>	3.	Design and prepare sketches of garments for- <ul style="list-style-type: none"> • Elementary school child. • Teen-age child. 	CO2
<p><i>LSO 4.1.</i> Select a suitable method for showcasing the design.</p> <p><i>LSO 4.2.</i> Prepare design collection portfolio of Garments for Newborns, Toddlers, School going children and Teenage.</p> <p><i>LSO 4.3.</i> Prepare design collection portfolio of accessories for Newborns, Toddlers, School going children and Teenage.</p>	4.	Prepare design collection portfolio of Garments and accessories for Newborns, Toddlers, School going children and Teenage.	CO2
<p><i>LSO 5.1.</i> Take measurements related to the given sleeves and collar for the given sample.</p>	5.	Prepare pattern blocks and then stitch various types of sleeves (Plain and Puff) and collars for Kids garments using suitable fabrics.	CO2

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<p><i>LSO 5.2.</i> Identify the elements, parameters, and tools for making the given sleeves and collar blocks.</p> <p><i>LSO 5.3.</i> Prepare sleeve and collar pattern blocks for the given sample.</p> <p><i>LSO 5.4.</i> Perform cutting of the given sleeves and collar as per the prepared block.</p> <p><i>LSO 5.5.</i> Stitch the sleeves and collar for the given sample using suitable fabrics.</p>			
<p><i>LSO 6.1.</i> Take measurements related to the given A-line frock and Easy frock for the given sample.</p> <p><i>LSO 6.2.</i> Identify the elements, parameters, and tools for making the given A-line frock and Easy frock blocks.</p> <p><i>LSO 6.3.</i> Prepare A-line frock and Easy frock pattern blocks for the given sample.</p> <p><i>LSO 6.4.</i> Perform cutting of the given A-line frock and Easy frock as per the prepared block.</p> <p><i>LSO 6.5.</i> Stitch the A-line frock and Easy frock for the given sample using suitable fabrics.</p>	6.	Prepare pattern blocks and then stitch A-line frocks and Easy frocks for Kids garments using suitable fabrics.	CO2, CO3
<p><i>LSO 7.1.</i> Take measurements related to the given Umbrella frock for the given sample.</p> <p><i>LSO 7.2.</i> Prepare Umbrella frock pattern block for the given sample.</p> <p><i>LSO 7.3.</i> Perform cutting of the given Umbrella frock as per the prepared block.</p> <p><i>LSO 7.4.</i> Stitch the Umbrella frock for the given sample using suitable fabrics.</p>	7.	Prepare pattern blocks and then stitch Umbrella frock for Kids garments using suitable fabrics.	CO2, CO3
<p><i>LSO 8.1.</i> Take measurements related to the given Kids Night dress for the given sample.</p> <p><i>LSO 8.2.</i> Prepare Kids Night dress pattern block for the given sample.</p> <p><i>LSO 8.3.</i> Perform cutting of the given Kids Night dress as per the prepared block.</p> <p><i>LSO 8.4.</i> Stitch the Kids Night dress for the given sample using suitable fabrics.</p>	8.	Prepare pattern blocks and then stitch Kids Night dress using suitable fabrics.	CO2, CO3
<p><i>LSO 9.1.</i> Take measurements related to the given Basic Skirt for the given sample.</p> <p><i>LSO 9.2.</i> Prepare Basic Skirt pattern block for the given sample.</p> <p><i>LSO 9.3.</i> Perform cutting of the given Basic Skirt as per the prepared block.</p> <p><i>LSO 9.4.</i> Stitch the Basic Skirt for the given sample using suitable fabrics.</p>	9.	Prepare pattern blocks and then stitch Basic Skirt for Kids garments using suitable fabrics.	CO2, CO4
<p><i>LSO 10.1.</i> Take measurements related to the given Pleated Skirt for the given sample.</p> <p><i>LSO 10.2.</i> Prepare Pleated Skirt pattern block for the given sample.</p> <p><i>LSO 10.3.</i> Perform cutting of the given Pleated Skirt as per the prepared block.</p> <p><i>LSO 10.4.</i> Stitch the Pleated Skirt for the given sample using suitable fabrics.</p>	10.	Prepare pattern blocks and then stitch Pleated Skirt for Kids garments using suitable fabrics.	CO2, CO4
<p><i>LSO 11.1.</i> Take measurements related to the given Spiral skirt and Layered skirt for the given sample.</p>	11.	Prepare pattern blocks and then stitch kids Spiral skirt and Layered skirt using suitable fabrics.	CO2, CO4

Practical/Lab Session Outcomes (LSOs)	S. No.	Laboratory Experiment/Practical Titles	Relevant COs Number(s)
<p><i>LSO 11.2.</i> Prepare Spiral skirt and Layered skirt pattern blocks for the given sample.</p> <p><i>LSO 11.3.</i> Perform cutting of the given Spiral skirt and Layered skirt as per the prepared blocks.</p> <p><i>LSO 11.4.</i> Stitch the Spiral skirt and Layered skirt for the given sample using suitable fabrics.</p>			
<p><i>LSO 12.1.</i> Take measurements related to the given kids Top for the given sample.</p> <p><i>LSO 12.2.</i> Prepare kids Top pattern block for the given sample.</p> <p><i>LSO 12.3.</i> Perform cutting of the given kids top as per the prepared block.</p> <p><i>LSO 12.4.</i> Stitch the Basic Skirt for the given sample using suitable fabrics.</p>	12.	Prepare pattern blocks and then stitch Tops for Kids garments using suitable fabrics.	CO2, CO4
<p><i>LSO 13.1.</i> Take measurements related to the given kids party wear dress for the given sample.</p> <p><i>LSO 13.2.</i> Prepare kids party wear dress pattern block for the given sample.</p> <p><i>LSO 13.3.</i> Perform cutting of the given kids party wear dress as per the prepared block.</p> <p><i>LSO 13.4.</i> Stitch the kids party wear dress for the given sample using suitable fabrics.</p>	13.	Prepare pattern blocks and then stitch kids party wear dress using suitable fabrics.	CO2, CO3, CO4, CO5

L) **Suggested Term Work and Self Learning: S2451304** Some sample suggested assignments, micro project and other activities are mentioned here for reference.

a. **Assignments:**

- i. Prepare sketches of self-help garments.
- ii. Prepare sheets on designing & drafting of following garments:
 - Pleated skirt.
 - Spiral skirt.
 - Layered skirt.
 - Tops
 - Tunic

Note: Drafting should be on $\frac{1}{4}$ scales.

- iii. Prepare sheet on Upper bodice block.
- iv. Prepare sheets on following sleeve blocks: Plain sleeve and Puff sleeve.
- v. Prepare sheet on basic skirt block.
- vi. Prepare sheets on designing & drafting of following garments:
 - Pleated skirt.
 - Spiral skirt.
 - Layered skirt.
 - Tops
 - Tunic

Note: Drafting should be on $\frac{1}{4}$ scales.

- vii. Prepare sheets on designing & drafting of party wear dresses.

b. Micro Projects:

- i. Prepare a collection of trimming materials such as laces, buttons, and appliques used children's garments with detailed specifications
- ii. Make a chart showing flow of work in a garment industry producing men's wear.
- iii. Download 5 videos of men's wear garment manufacturing industries and write a report on type of garment, material and accessories used, number of machines involved, steps of construction, finishing packing, warehousing method used.
- iv. Design and develop range of styles for any one type of garment given in syllabus.
- v. Prepare the following garments for the children of given age groups:
 - A line frock,
 - Easy frock,
 - Umbrella frock,
 - Night dress.

Note: The project will comprise of following components:

- Selection of design.
- Selection of fabric and trimming materials.
- Estimation of fabric.
- Pattern drafting on full scale.
- Cutting & stitching.
- Approximate cost of final garment

- vi. Prepare the following garments for the children of given age groups:

- Pleated skirt.
- Spiral skirt.
- Layered skirt.
- Tops
- Tunic.

Note: The project will comprise of following components:

- Selection of design.
- Selection of fabric and trimming materials.
- Estimation of fabric.
- Pattern drafting on full scale.
- Cutting & stitching
- Approximate cost of final garment

- vii. Prepare two party wear dresses of different age group. The project will comprise of following components:

- Selection of design.
- Selection of fabric and trimming materials.
- Estimation of fabric.
- Pattern drafting on full scale.
- Cutting & stitching
- Approximate cost of final garment

c. Other Activities:

1. Seminar Topics:

- Categories and types of kids wear.
- Chronological changes in kids wear.

2. Visits: Visit nearby kids wear producing industry. Prepare report of visit with special comments on type of garment, Production process used, material used, single component/batch production/mass production and cost of production.

3. Self-learning topics:

- Types and styles of kids wear.
- Prepare collection of paper patterns for different garments in different sizes.
- Operation breakdown and assembly of garments.

M) Suggested Course Evaluation Matrix: The course teacher has to decide and use appropriate assessment strategy and its weightage in theory, laboratory and Term Work for ensuring CO attainment. The response/performance of each student in each of these designed activities is to be used to calculate CO attainment.

COs	Course Evaluation Matrix						
	Theory Assessment (TA)**		Term Work Assessment (TWA)			Lab Assessment (LA)#	
	Progressive Theory Assessment (PTA) Class/Mid Sem Test	End Theory Assessment (ETA)	Term Work & Self Learning Assessment			Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)
			Assignments	Micro Projects	Other Activities*		
CO-1	15%	15%	15%	-	-	-	20%
CO-2	10%	10%	10%	25%	25%	25%	20%
CO-3	15%	15%	15%	25%	25%	25%	20%
CO-4	30%	30%	30%	25%	25%	30%	20%
CO-5	30%	30%	30%	25%	25%	20%	20%
Total Marks	30	70	20	20	10	20	30
			50				

Legend:

*: Other Activities include self-learning, seminar, visits, product development etc.

** : Mentioned under point- (N)

#: Mentioned under point-(O)

Note:

- The percentage given are approximate
- In case of Micro Projects and End Laboratory Assessment (ELA), the achieved marks will be equally divided in all those COs mapped with total experiments.
- For CO attainment calculation indirect assessment tools like course exit survey need to be used which comprises of questions related to achievement of each COs.

N) Suggested Specification Table for End Semester Theory Assessment: Specification table represents the reflection of sample representation of assessment of cognitive domain of full course.

Unit Title and Number	Total Classroom Instruction (CI) Hours	Relevant COs Number (s)	Total Marks	ETA (Marks)		
				Remember (R)	Understanding (U)	Application & above (A)
Unit-1.0 Introduction to Children Garments.	8	CO1	10	3	3	4
Unit-2.0 Basic Blocks for Children Garments.	10	CO1, CO2	8	3	2	3
Unit-3.0 Construction of Frocks and Night Dress	10	CO2, CO3	10	4	3	3
Unit-4.0 Construction of Skirts, Tops & Tunic.	10	CO2, CO4	21	4	8	9
Unit-5.0 Construction of Party Wear dresses for children.	10	CO2, CO3, CO4, CO5	21	6	7	8
Total	48	-	70	20	23	27

Note: Similar table can also be used to design class/mid-term/ internal question paper for progressive assessment.

Total laboratory instruction (LI) hours- 96 hours in the semester.

O) Suggested Assessment Table for Laboratory (Practical):

S. No.	Laboratory Practical Titles	Relevant COs Number(s)	PLA/ELA		
			Performance		Viva-Voce (%)
			PRA* (%)	PDA** (%)	
1.	Take measurements using direct method by measuring tape and scales and compare with the standard measurement charts.	CO2	30	60	10
2.	Design and prepare sketches of garments for- <ul style="list-style-type: none"> • Toddlers. • Pre- school child. • Nursery school child. 	CO2	40	50	10
3.	Design and prepare sketches of garments for- <ul style="list-style-type: none"> • Elementary school child. • Teen-age child. 	CO2	30	60	10
4.	Prepare design collection portfolio of Garments and accessories for Newborns, Toddlers, School going children and Teenage.	CO2	30	60	10
5.	Prepare pattern blocks and then stitch various types of sleeves (Plain and Puff) and collars for Kids garments using suitable fabrics.	CO2	30	60	10
6.	Prepare pattern blocks and then stitch A-line frocks and Easy frocks for Kids garments using suitable fabrics.	CO2, CO3	30	60	10
7.	Prepare pattern blocks and then stitch Umbrella frock for Kids garments using suitable fabrics.	CO2, CO3	30	60	10
8.	Prepare pattern blocks and then stitch Kids Night dress using suitable fabrics.	CO2, CO3	40	50	10
9.	Prepare pattern blocks and then stitch Basic Skirt for Kids garments using suitable fabrics.	CO2, CO4	40	50	10
10.	Prepare pattern blocks and then stitch Pleated Skirt for Kids garments using suitable fabrics.	CO2, CO4	40	50	10
11.	Prepare pattern blocks and then stitch kids Spiral skirt and Layered skirt using suitable fabrics.	CO2, CO4	30	60	10
12.	Prepare pattern blocks and then stitch Tops for Kids garments using suitable fabrics.	CO2, CO4	30	60	10
13.	Prepare pattern blocks and then stitch kids party wear dress using suitable fabrics.	CO2, CO3, CO4, CO5	40	50	10

Legend:

PRA*: Process Assessment

PDA**: Product Assessment

Note: This table can be used for both end semester as well as progressive assessment of practical. Rubrics need to be prepared by the course teacher for each experiment/practical to assess the student performance.

P) Suggested Instructional/Implementation Strategies: Different Instructional/ Implementation Strategies may be appropriately selected, as per the requirement of the content/outcome. Some of them are Improved Lecture, Tutorial, Case Method, Group Discussion, Industrial visits, Industrial Training, Field Trips, Portfolio Based, Learning, Role Play, Live Demonstrations in Classrooms, Lab, Field Information and Communications Technology (ICT)Based Teaching Learning, Blended or flipped mode, Brainstorming, Expert Session, Video Clippings, Use of Open Educational Resources (OER), MOOCs etc.

Q) List of Major Laboratory Equipment, Tools, and Software:

S. No.	Name of Equipment, Tools and Software	Broad Specifications	Relevant Experiment /Practical Number
1	Sewing machines & attachments	Treadle operated & Electric Operated	All experiments
2	Scissors	Dress makers, pinking & trimming scissors.	All experiments
3	Hand Needles & Machine Needles	7, 9 no.,16, 18 no.	All experiments
4	Iron	Electric steam iron	All experiments
5	Measuring Tape	60 inches	All experiments
6	Ironing Table	V shape- 5'by3'	All experiments
7	L scale	12 by 24 inch	All experiments
8	Cutting Table	3' by 6'	All experiments
9	Seam ripper		All experiments
10	Screw Driver Set		All experiments
11	Loop Turner		All experiments
12	French Curve		All experiments
13	Brown Paper		All experiments

R) Suggested Learning Resources:**(a) Books:**

S. No.	Titles	Author(s)	Publisher and Edition with ISBN
1.	Techniques of Drafting and Pattern making Garments for Kids & Adolescents.	Padmavati. B	Atlantic Publishers & Distributors., 2009 ISBN:9788126909926
2.	Comdex Fashion Design- Vol-2 Ensembles for your Body Type.	Dr. Navneet Kaur	Dreamtech Press, 2010 Distributors., 2009 ISBN:9780350040942
3.	Rapidex Home Tailoring Course	Kusum Sharma	Pustak Mahal, 2014 Distributors., 2009 ISBN:9788122315059
4.	Zarapkar System of Cutting	K.R. Zarapkar & Arvind. K. Zarapkar	Navneet Education Limited, 2011, Distributors., 2009 ASIN:B07MYWLHN
5.	The Art of Sewing	Anna Jacob Thomas	UBS Publishers & Distributors, 1995, Distributors., 2009 ISBN:8185944326

(b) Online Educational Resources:

1. www.pinterest.com
2. www.allfreeseewing.com

Note: Teachers are requested to check the creative commons license status/ financial implications of the suggested, online educational resources before use by the students.

(c) Others:

1. Fundamentals of Men's Fashion Design: A Guide to Tailored Clothes by Robert L Green
2. The Men's Fashion Book by Phaidon Editors
3. DRESSING MAN: Mastering the Art of Permanent Fashion by Allan Flusser
4. Lab Manuals

- A) **Course Code** : 2451305(T2451305/S2451305)
B) **Course Title** : Resource Management in Garment Manufacturing
C) **Pre- requisite Course(s)** :
D) **Rationale** :

Resource management plays a crucial role in the garment manufacturing industry. Efficient utilization of resources, such as production capacity, inventory, materials, energy, and human resources, is essential for achieving sustainability, cost efficiency, and operational excellence. The garment manufacturing industry is experiencing the impact of Industry 4.0 technologies, such as automation, robotics, and data analytics. The curriculum addresses this by including a module on technology and automation, enabling students to understand the potential of these technologies in resource management and prepare them for the digital transformation in the industry. The curriculum aims to develop a range of skills relevant to resource management in garment manufacturing. These skills include demand forecasting, inventory optimization, supplier management, quality control, lean manufacturing techniques, energy-saving measures, and workforce planning. By acquiring these skills, students will be prepared to meet the industry's demands and contribute effectively to the resource management aspects of garment manufacturing organizations.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/ laboratory/ workshop/ field/ industry.

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

- CO-1** Correlate the significance of resource management in the context of garment manufacturing.
- CO-2** Apply production planning and control techniques to effectively manage production schedules and optimize capacity utilization.
- CO-3** Implement inventory management strategies to minimize stockouts, reduce carrying costs, and enhance supply chain efficiency.
- CO-4** Implement material management strategies, including procurement, sourcing, and quality control, to ensure timely availability of materials and maintain product quality.
- CO-5** Use environmental regulations and standards in implementing sustainable production practices for garment manufacturing industry.
- CO-6** Identify the role of Industrial Revolution 4.0 technologies and automation on resource management in garment manufacturing.

F) Suggested Course Articulation Matrix (CAM):

Course Outcomes (COs)	Programme Outcomes(POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2
CO-1	3	-	-	-	-	2	-		
CO-2	3	2	-	-	-	2	-		
CO-3	3	3	-	-	-	2	1		
CO-4	3	3	-	-	-	2	1		
CO-5	3	-	-	-	3	-	-		
CO-6	3	-	-	-	-	-	1		

Legend: High (3), Medium (2), Low (1) and No mapping (-)

* PSOs will be developed by respective programme coordinator at institute level. As per latest NBA guidelines, formulating PSOs is optional

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					Total Credits (C)
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	
			L	T				
	2451305	Resource Management in Garment Manufacturing	03	-	-	02	05	04

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term Work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note: TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of teacher to ensure outcome of learning.

H) Assessment Scheme:

Board of Study	Course Code	Course Title	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
	2451305	Resource Management in Garment Manufacturing	30	70	20	30	-	-	150

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self-learning, any other student activities etc.

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
- Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done **internally (40%)** as well as **externally (60%)**. Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/presentation related to these activities will be carried out by external faculty/expert (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course. For valid and reliable assessment, the internal faculty should prepare checklist & rubrics for these activities.

I) **Course Curriculum Detailing:** This course curriculum detailing depicts learning outcomes at course level and session level and their attainment by the students through Classroom Instruction (CI), Laboratory Instruction (LI), Term Work (TW) and Self Learning (SL). Students are expected to demonstrate the attainment of Theory Session Outcomes (TSOs) and Lab Session Outcomes (LSOs) leading to attainment of Course Outcomes (COs) upon the completion of the course. While curriculum detailing, NEP 2020 related reforms like Green skills, Sustainability, Multidisciplinary aspects, Society connect, Indian Knowledge System (IKS) and others must be integrated appropriately.

J) Theory Session Outcomes (TSOs) and Units: T2451305

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 1a.</i> Explain resource management in the context of garment manufacturing.</p> <p><i>TSO 1b.</i> Identify the interrelationships between resource management, sustainability, and cost efficiency in the garment manufacturing industry.</p> <p><i>TSO 1c.</i> Correlate the role of effective resource management in achieving operational excellence and competitive advantage in garment manufacturing.</p>	<p>Unit-1.0 Introduction to Resource Management in Garment Manufacturing</p> <p>1.1 Introduction to resource management and its significance in the garment manufacturing industry.</p> <p>1.2 Understanding the relationship between resource management, sustainability, and cost efficiency.</p> <p>1.3 Exploring the role of effective resource management in achieving operational excellence.</p>	CO1

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p><i>TSO 2a.</i> Describe the principles and objectives of production planning and control in the garment manufacturing context.</p> <p><i>TSO 2b.</i> Apply techniques of demand forecasting, such as historical data analysis and market research, to predict the given futuristic garment demand.</p> <p><i>TSO 2c.</i> Develop production schedules that effectively allocate resources and meet customer requirements for the given situation.</p> <p><i>TSO 2d.</i> Analyze capacity requirements and optimize resource utilization to enhance productivity and reduce bottlenecks in the given situation.</p>	<p>Unit-2.0 Production Planning and Control</p> <p>2.1 Principles of production planning and control in garment manufacturing.</p> <p>2.2 Techniques for demand forecasting and managing production schedules.</p> <p>2.3 Capacity planning and optimization strategies to improve resource utilization.</p>	<p>CO2</p>
<p><i>TSO 3a.</i> Correlate the importance of inventory management in garment manufacturing.</p> <p><i>TSO 3b.</i> Classify inventory items using appropriate technique for the given situation.</p> <p><i>TSO 3c.</i> Apply suitable inventory management strategy to balance inventory levels and reduce carrying costs for the given situation.</p> <p><i>TSO 3d.</i> Implement suitable inventory control technique to minimize stockouts and maintain efficient supply chain operations for the given situation.</p>	<p>Unit-3.0 Inventory Management</p> <p>3.1 Inventory management principles and strategies in garment manufacturing.</p> <p>3.2 ABC analysis and inventory classification techniques.</p> <p>3.3 Just-in-Time (JIT) and Economic Order Quantity (EOQ) methods for optimizing inventory levels.</p>	<p>CO3</p>
<p><i>TSO 4a.</i> Explain the importance of material management in the garment manufacturing industry.</p> <p><i>TSO 4b.</i> Develop suitable strategy for procurement and sourcing of materials for the given situation.</p> <p><i>TSO 4c.</i> Apply suitable technique for supplier evaluation and selection in the given situation.</p> <p><i>TSO 4d.</i> Implement suitable quality control measures to ensure compliance with specifications and standards in the given situation.</p>	<p>Unit-4.0 Material Management</p> <p>4.1 Procurement and sourcing strategies for garment manufacturing.</p> <p>4.2 Supplier relationship management and vendor selection criteria.</p> <p>4.3 Quality control and inspection processes for incoming materials.</p>	<p>CO4</p>
<p><i>TSO 5a.</i> Identify the regulatory requirements and environmental standards applicable to the garment manufacturing industry.</p> <p><i>TSO 5b.</i> Use strategies to ensure compliance with environmental regulations and standards for the given garment manufacturing operations.</p> <p><i>TSO 5c.</i> Implement sustainable production practices to reduce environmental impact in the given situation.</p> <p><i>TSO 5d.</i> Implement environmental management systems to promote sustainability in the given garment manufacturing situation.</p>	<p>Unit-5.0 Environmental Compliance and Sustainability</p> <p>5.1 Regulatory requirements and environmental standards in the garment manufacturing industry.</p> <p>5.2 Sustainable production practices, including eco-friendly materials and processes.</p> <p>5.3 Implementing and monitoring environmental management systems.</p>	<p>CO5</p>

Major Theory Session Outcomes (TSOs)	Units	Relevant COs Number(s)
<p>TSO 6a. Identify IR 4.0 technologies and automation solutions applicable to the given garment manufacturing situation.</p> <p>TSO 6b. Evaluate the benefits and challenges of implementing technology and automation in the given garment manufacturing process(es).</p> <p>TSO 6c. Integrate digital systems for resource tracking, optimization, and real-time decision-making in the given garment manufacturing operation(s).</p>	<p>Unit-6.0 Technology and Automation</p> <p>6.1 Introduction to Industrial Revolution 4.0 technologies in garment manufacturing.</p> <p>6.2 Automation and robotics in production and supply chain management.</p> <p>6.3 Integration of digital systems for resource tracking and optimization.</p>	<p>CO6</p>

Note: One major TSO may require more than one Theory session/Period.

K) Suggested Laboratory (Practical) Session Outcomes (LSOs) and List of Practical: (Not Applicable)

L) **Suggested Term Work and Self Learning: S2451305** Some sample suggested assignments, micro project and other activities are mentioned here for reference.

a. Assignments:

- Identify the interrelationships between resource management, sustainability, and cost efficiency in the readymade garment manufacturing industry.
- Apply market research techniques of demand forecasting to predict the given futuristic garment demand for men's wear.
- Provide situations that apply Just-in-Time (JIT) technique for optimizing inventory levels.
- Enlist the Quality control parameters for kids wear garment manufacturing setup.
- List sustainable production practices of men's wear industry.
- List IR 4.0 practices applicable to garment industry.

b. Micro Projects:

1. Prepare a report on any Kids wear manufacturing unit elaborating the role of effective resource management in achieving operational excellence and competitive advantage.
2. Prepare a report on demand forecasting of the selected Men's wear garment unit.
3. Prepare a report on Inventory control of the selected Women's wear garment unit.
4. Prepare a report on environmental compliances to be observed by a dying department in garment manufacturing industry.

c. Other Activities:

1. Seminar Topics:
 - Sustainable fashion practices in garment manufacturing industry.
 - IR 4.0 in garment manufacturing industry.
 - Supply Chain Managements in garment manufacturing industry
2. Visits:
 - Visit nearby garment manufacturing industry to observe Production Planning strategies.
 - Visit a nearby garment shop to observe inventory control techniques.
 - Visit nearby garment manufacturing industry to observe Quality Control parameters.

3. Self-learning topics:

- Understanding the relationship between resource management, sustainability, and cost efficiency.
- Historical data analysis for demand forecasting
- Economic Order Quantity (EOQ) methods for optimizing inventory levels.

M) Suggested Course Evaluation Matrix: The course teacher has to decide and use appropriate assessment strategy and its weightage in theory, laboratory and Term Work for ensuring CO attainment. The response/performance of each student in each of these designed activities is to be used to calculate **CO attainment**.

COs	Course Evaluation Matrix						
	Theory Assessment (TA)**		Term Work Assessment (TWA)			Lab Assessment (LA)#	
	Progressive Theory Assessment (PTA) Class/Mid Sem Test	End Theory Assessment (ETA)	Term Work & Self Learning Assessment			Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)
Assignments			Micro Projects	Other Activities*			
CO-1	10%	20%	10%	25%	-	-	-
CO-2	15%	20%	15%	25%	25%	-	-
CO-3	30%	20%	30%	25%	25%	-	-
CO-4	30%	20%	30%	-	25%	-	-
CO-5	15%	20%	15%	25%	25%	-	-
Total Marks	30	70	20	20	10	-	-
			50				

Legend:

*: Other Activities include self- learning, seminar, visits, surveys, product development, software development etc.

** : Mentioned under point- (N)

#: Mentioned under point-(O)

Note:

- The percentage given are approximate
- In case of Micro Projects and End Laboratory Assessment (ELA), the achieved marks will be equally divided in all those COs mapped with total experiments.
- For CO attainment calculation indirect assessment tools like course exit survey need to be used which comprises of questions related to achievement of each COs.

N) Suggested Specification Table for End Semester Theory Assessment: Specification table represents the reflection of sample representation of assessment of cognitive domain of full course.

Unit Title and Number	Total Classroom Instruction (CI) Hours	Relevant COs Number(s)	Total Marks	ETA (Marks)		
				Remember (R)	Understanding (U)	Application & above (A)
Unit-1.0 Introduction to Resource Management in Garment Manufacturing	6	CO1	10	4	2	4
Unit-2.0 Production Planning and Control	7	CO2	10	3	2	5
Unit-3.0 Inventory Management	10	CO3	15	4	3	8
Unit-4.0 Material Management	10	CO3	15	3	3	9
Unit-5.0 Environmental Compliance and Sustainability	6	CO5	10	3	3	4
Unit-6.0 Technology and Automation	6	CO6	10	3	3	4
Total	45	-	70	20	16	34

Note: Similar table can also be used to design class/mid-term/ internal question paper for progressive assessment.

O) Suggested Assessment Table for Laboratory (Practical): (Not Applicable)

P) Suggested Instructional/Implementation Strategies: Different Instructional/ Implementation Strategies may be appropriately selected, as per the requirement of the content/outcome. Some of them are Improved Lecture, Tutorial, Case Method, Group Discussion, Industrial visits, Industrial Training, Field Trips, Portfolio Based, Learning, Role Play, Live Demonstrations in Classrooms, Lab, Field Information and Communications Technology (ICT)Based Teaching Learning, Blended or flipped mode, Brainstorming, Expert Session, Video Clippings, Use of Open Educational Resources (OER), MOOCs etc.

Q) List of Major Laboratory Equipment, Tools and Software: (Not Applicable)

R) Suggested Learning Resources:

(a) Books:

S. No.	Titles	Author(s)	Publisher and Edition with ISBN
1.	Fashion Supply Chain Management	Michael Londrigan , Jacqueline M. Jenkins	Bloomsbury Publishing ISBN: 9781501317781
2.	HR Analytics Essentials You Always Wanted To Know (Self-Learning Management Series)	Dr. Michael Walsh	Vibrant Publishers ISBN: 10:1-63651-034-5
3.	Retail Management	Barry Berman , Joel R Evans , Patrali Chatterjee , Ritu Srivastava	Pearson, ISBN978-9332587694

(b) Online Educational Resources:

- <https://fashinza.com/brands-and-retail/management-tips/your-15-most-important-hr-tools-in-the-fashion-industry/>
- <https://www.aptean.com/en-AU/insights/blog/control-costs-with-fashion-supply-chain-management>
- <https://textiles.ncsu.edu/tatm/undergraduate/fashion-and-textile-management/>
- <https://www.fibre2fashion.com/industry-article/2322/role-of-hr>
- https://dmudubai.com/postgraduate-courses/?gad=1&gclid=Cj0KCCQjwz8emBhDrARIsANNjS7jUnYoyxatJvmCz_WA15m6jgvs7wGaH3pGWV9J4YRF0Yh0pYzWg5saAqNyEALw_wcB

Note: Teachers are requested to check the creative commons license status/ financial implications of the suggested, online educational recourses before use by the students.

(c) Others:

- A) **Course Code** : 2451306(P2451306/S2451306)
 B) **Course Title** : Summer Internship -I (Common For all Programmes)
 C) **Pre- requisite Course(s)** :
 D) **Rationale** :

Diploma students are required to give exposure of their own diploma programme related industrial hardware, software and practices, just after completing one semester, so that they can correlate this industrial exposure with the concept being taught in the branch specific specialized engineering courses in forthcoming semesters. Mentors/Coordinators/ Teachers need to map the academic contents of the programme of study with the activities of this industrial exposure and are advised to follow the 'Whole to Part' approach to make the students aware about the potential industry's expected outcomes & setup ('Whole') from the diploma programme – and then teaching the related concepts ('Part') of the same in subsequent semesters. In this way before actually being exposed to academic input specific to diploma programmes, the students need to be sent to the nearby/local industries and also may be advised to explore information related to their programme of study using different sources related to potential employment opportunities of both wage and self-employment, job function, job position, nearby relevant industries and so on.

The summer internship will provide the direction to the students and also help in mind mapping to plan their futuristic course of action, after passing the diploma. This would also bridge the gap between their virtual imagination about the outcome of the programme and real happenings related to the diploma programme.

- E) **Course Outcomes (COs):** After the completion of the course, teachers are expected to ensure the accomplishment of following course outcomes by the learners. For this, the learners are expected to perform various activities related to three learning domains (Cognitive, Psychomotor and Affective) in classroom/laboratory/workshop/field/ industry.

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

- CO-1** Comprehend the practices of identified industry or world of work related to diploma engineering programme of study.
CO-2 Map real equipment, processes, product, management, operations etc. to the course of study through various glimpses of input, process and output in different type of industries.
CO-3 Identify the probable enterprises /startups for futuristic planning and self-growth.
CO-4 Identify the probable job function and job position in their relevant programme of study.

- F) **Suggested Course Articulation Matrix (CAM):**

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes* (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO-1	PSO-2
CO-1	3	-	-	1	-	-	1		
CO-2	3	-	-	1	-	-	1		
CO-3	3	-	-	-	1	-	2		
CO-4	3	-	-	-	1	-	2		

Legend: High (3), Medium (2), Low (1) and No mapping (-)

* PSOs will be developed by respective programme coordinator at institute level. As per latest NBA guidelines, formulating PSOs is optional

G) Teaching & Learning Scheme:

Board of Study	Course Code	Course Title	Scheme of Study (Hours/Week)					
			Classroom Instruction (CI)		Lab Instruction (LI)	Notional Hours (TW+ SL)	Total Hours (CI+LI+TW+SL)	Total Credits (C)
			L	T				
	2451306	Summer Internship -I	-	-	02	02	04	02

Legend:

CI: Classroom Instruction (Includes different instructional/implementation strategies i.e. Lecture (L), Tutorial (T), Case method, Demonstrations, Video demonstration, Problem based learning etc. to deliver theoretical concepts)

LI: Laboratory Instruction (Includes experiments/practical performances /problem-based experiences in laboratory, workshop, field or other locations using different instructional/Implementation strategies)

Notional Hours: Hours of engagement by learners, other than the contact hours for ensuring learning.

TW: Term Work (includes assignments, seminars, micro projects, industrial visits, any other student activities etc.)

SL: Self Learning, MOOCs, spoken tutorials, online educational resources etc.

C: Credits = (1 x CI hours) + (0.5 x LI hours) + (0.5 x Notional hours)

Note: TW and SL have to be planned by the teacher and performed by the learner under the continuous guidance and feedback of teacher to ensure outcome of learning.

H) Assessment Scheme:

Board of Study	Course Code	Course Title	Assessment Scheme (Marks)						Total Marks (TA+TWA+LA)
			Theory Assessment (TA)		Term Work & Self-Learning Assessment (TWA)		Lab Assessment (LA)		
			Progressive Theory Assessment (PTA)	End Theory Assessment (ETA)	Internal	External	Progressive Lab Assessment (PLA)	End Laboratory Assessment (ELA)	
	2451306	Summer Internship -I	-	-	10	15	10	15	50

Legend:

PTA: Progressive Theory Assessment in class room (includes class test, mid-term test and quiz using online/offline modes)

PLA: Progressive Laboratory Assessment (includes process and product assessment using rating Scales and rubrics)

TWA: Term work & Self Learning Assessment (Includes assessment related to student performance in assignments, seminars, micro projects, industrial visits, self-learning, any other student activities etc.)

Note:

- ETA & ELA are to be carried out at the end of the term/ semester.
- Term Work is to be done by the students under the guidance of internal faculty but its assessment will be done **internally (40%)** as well as **externally (60%)**. Assessment related to planning and execution of Term Work activities like assignment, micro project, seminar and self-learning is to be done by internal faculty (Internal Assessment) whereas assessment of output/product/ presentation related to these activities will be carried out by external faculty/expert (External Assessment). However, criteria of internal as well as external assessment may vary as per the requirement of respective course. For valid and reliable assessment, the internal faculty should prepare checklist & rubrics for these activities.

I) **Suggested Instructional/Implementation Strategies:** Mentors/ Coordinators/ Teachers need to plan and implement the summer internship in their respective programme as per the outcome expected from the programme. However in general, summer internship would help in exploring and exposing the student to the below mentioned dimensions of the world of work. These dimensions can further be explored in depth as per the need and advancement in respective programmes in later stages. Mentors/Coordinators/ Teachers need to map the academic contents of the programme of study with the activities of this industrial exposure and are advised to follow the whole to part approach to make the students aware about the potential industry's expected outcomes & setup ('Whole') from the specific diploma programme and then teaching the related concepts ('Part') of the same in subsequent semesters.

- Industrial Layout
- Organizational Structure
- Corporate Communications
- Strategic, Rolling and Developmental plans
- Maintenance Procedures
- Inventory Control and Management System
- Purchase and Store Procedures
- Major Machinery, Tools, Equipment, Devices, Software, Control System etc.
- Product Development, Manufacturing, Packaging and Delivery
- Project Management
- Operation and Maintenance
- Warehouse Management
- Assembly Line
- Quality Assurance and Testing Cell
- Process/ Software Development/ Fabrication/ Construction Work Management
- Testing and Quality Assurance Practices
- Total quality management
- Callibration and Certification practices
- Safety Practices
- Industrial Acts
- Industrial Grievances
- Behavioural Aspects
- Conduction of Meetings and Discussions
- Sales and Marketing Strategies
- Forecasting and Target Setting
- Production Planning and Control
- Storage Retrieved and Material handling Practices
- Automation and Control Facilities
- Enterprise Resource Planning (ERP)
- Supply Chain
- Customer Satisfaction Strategies
- Finance and Accounts
- Research and Development
- Promotion and Capacity Building Schemes
- Reduce, Reuse and Recycling Efforts and Policies
- Recognitions and Rewards
- After Sale Services
- Promotional Avenues
- Social Corporate responsibilities

J) Assessment of Summer Internship -I

S. No.	Criteria of Assessment	% of Weightage
1.	Maintaining the log book after having exposure to different types of industry/ world of work	15
2.	Preparing the list of job functions and job positions of relevant programme	20
3.	Identify the probable enterprise/ startup for futuristic planning	15
4.	Report writing of summer internship as per the prescribed format	30
5.	Presentation of Report	20
Total		100

Note: S. no. 1 to 3 shall be considered for progressive assessment. While S. No. 4 & 5 shall be considered for end term assessment