

**GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)**  
**Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021)**  
 6<sup>th</sup> – Semester

Course Title: **Integrated Textile Design**  
 (Course Code: 4365903)

Diploma programme in which this course is offered	Semester in which offered
Textile Designing	Sixth

## 1. RATIONALE

An integrated design project in Textile Designing serves as a comprehensive and practical approach to developing the skills, knowledge, and creativity of students. This type of project involves the incorporation of various elements such as research, conceptualization, technical skills, and presentation into a cohesive and meaningful Textile design. Through creativity and innovation, this course also seeks to fill the gap of convergence between designing education and entrepreneurship education in line with the demands of the industry and society.

## 2. COMPETENCY

The purpose of this course is to help the student to attain the following industry identified competency through various teaching learning experiences.

**The Student will be able to encompass a strong integrated skill and knowledge base that is essential to the Fashion & Textile industries.**

## 3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge and the relevant soft skills associated with this competency are to be developed in the student to display the following COs:

- a) **Identify & define the problem.**
- b) **Apply knowledge, skills & industry experience to create innovative ensembles a range of design solutions for showcasing in a public platform.**
- c) **Plan the resources to develop design for a defined problem.**
- d) **Justify the development/solution.**

## 4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (CI+T/2+P/2)	Examination Scheme				
L	T	P		Theory Marks		Practical Marks		Total Marks
			C	CA	ESE	CA	ESE	
-	-	6	3	-	-	100	100	200

(\*): Out of 30 marks under the theory CA, 10 marks are for assessment of the micro-project to facilitate integration of COs and the remaining 20 marks is the average of 2 tests to be

taken during the semester for assessing the attainment of the cognitive domain UOs required for the attainment of the COs.

**Legends:** *L*-Lecture; *T* – Tutorial/Teacher Guided Theory Practice; *P* -Practical; *C* – Credit, *CA* - Continuous Assessment; *ESE* -End Semester Examination.

## 5. SUGGESTED PRACTICAL EXERCISES

The following practical outcomes (PrOs) are the sub-components of the COs. *These PrOs need to be attained to achieve the Cos.*

S. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
	<b>Students have to create a design/ develop a product from the areas of Fabric printing and dyeing, Designer garments and accessories, Interior design with textiles, Textile arts, Sustainable fashion, etc.</b>	-	-
	<b>Some examples are listed below.</b>	-	-
1	Developing an alternate technology for real-time production tracking (other than RFID and Barcode)		
2	Designing and developing a mobile application for various garment factory activities		
3	Smart Factory – Cost of setup and ROI and what is required to set-up a smart factory		
4	Industry 4.0: The current state and possibility in the apparel industry		
5	Sustainable fashion manufacturing / sustainable fashion supply chain		
6	Starting a clothing label while studying		
7	Enhancing the application of Big Data in the garment industry		
8	Developing Artificial Intelligence (AI) tool for the available apparel software or focusing on the chronic problems faced the garment industry.		
9	Production of formal occasion (boardroom meeting) wear for a young lady		
10	Adaptation of ham traditional designs as sources of motifs for fabric and apparel embellishment using batik		
11	An adaptation of woven fabric on batik for personal clothing		
12	The sales and usage of secondhand clothing		
13	Strategies for improving the production of ready-to-wear garments in clothing industries		
14	Fashion and art - Explore the relationship between fashion and art and create designs that incorporate artistic elements.		
15	Ethnic fashion - Study ethnic fashion and create designs that are inspired by different cultures.		

16	Sustainable packaging - Explore sustainable packaging options for fashion products, including biodegradable and recyclable materials.		
17	Children, fashion - Design clothing for children that is stylish, comfortable, and practical.		
18	Fashion and disability - Create designs that cater to people with disabilities, such as adaptive clothing.		
19	Sustainable fashion design - Research and design clothing that is environmentally friendly and promotes sustainability.		
20	Up-cycling - Create fashion designs using recycled materials to promote sustainability and reduce waste.		
21	Fashion and culture - Examine the intersection between fashion and different cultures, exploring the historical and contemporary influences.		
22	Fashion and technology - Explore the relationship between fashion and technology and create designs that incorporate technology		
23	Fashion and psychology - Examine the psychological impact of fashion and how clothing can affect mood and behavior		
24	Street wear - Research and design clothing that is inspired by street fashion and urban culture.		
25	Eco-friendly textiles - Research and develop eco-friendly textiles that can be used in fashion design.		
26	Haute couture - Study the art of haute couture and create designs that showcase intricate craftsmanship and attention to detail.		
27	Gender-neutral fashion - Create clothing that is not restricted by traditional gender norms.		
28	Fashion and politics - Explore the relationship between fashion and politics, including how clothing can be used as a form of protest.		
29	Sportswear - Research and design clothing that is specifically designed for sports and athletic activities.		
30	Fashion illustration - Study the art of fashion illustration and create a collection of sketches or illustrations.		
31	Fashion and history - Research and create designs inspired by historical fashion movements or periods.		
32	Costume design - Explore the art of costume design for theatre, film, or television.		
33	Fashion marketing - Study fashion marketing and develops a marketing plan for a fashion brand.		
34	Luxury fashion - Research and design high-end fashion pieces that showcase luxury materials and craftsmanship.		
35	Fashion and social media - Explore the impact of social media on fashion and create designs that appeal to social media influencers and audiences.		
36	Fashion and the environment - Examine the environmental impact of the fashion industry and create designs that promote sustainability.		

37	Swimwear - Research and design swimwear for men and women.		
38	Developing an alternate technology for real-time production tracking (other than RFID and Barcode)		

## 6. MAJOR EQUIPMENT/ INSTRUMENTS AND SOFTWARE REQUIRED

These major equipment with broad specifications for the PrOs is a guide to procure them by the administrators to usher in uniformity of practical in all institutions across the state.

S. No.	Equipment Name with Broad Specifications	PrO. No.
1	As per individual's requirements.	

## 7. AFFECTIVE DOMAIN OUTCOMES

The following *sample* Affective Domain Outcomes (ADOs) are embedded in many of the above mentioned COs and PrOs. More could be added to fulfill the development of this course competency.

- Follow safety practices.
- Practice good housekeeping.
- Demonstrate working as a leader/a team member.
- Maintain tools and equipment.
- Follow ethical practices.

The ADOs are best developed through the laboratory/field based exercises. Moreover, the level of achievement of the ADOs according to Krathwohl's 'Affective Domain Taxonomy' should gradually increase as planned below:

- 'Valuing Level' in 1<sup>st</sup> year
- 'Organization Level' in 2<sup>nd</sup> year.
- 'Characterization Level' in 3<sup>rd</sup> year.

## 8. UNDERPINNING THEORY

The major underpinning theory is given below based on the higher level UOs of *Revised Bloom's taxonomy* that are formulated for development of the COs and competency. If required, more such UOs could be included by the course teacher to focus on attainment of COs and competency.

Unit	Unit Outcomes (UOs) (4 to 6 UOs at different levels)	Topics and Sub-topics
	Not Applicable	

**Note:** The Unit Outcomes (UOs) need to be formulated at different level of Revised Bloom's Taxonomy to accelerate the attainment of the COs and the competency.

## 9. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
Not Applicable		-	-	-	-	-

There is no question paper but one can refer below table as a general guideline for the subject.

Sr. No.	Description	Marks
1.	Identification of broad area of work/ definition of problem	10
2.	Defining objectives with probable outcome	12
3.	Utility of the development/design for industry/ Academia/ Society	12
4.	Related survey of Industry / Society / Institutes for work /Problem Identification	14
5.	Methodology/experimentation adopted for work /solution	16
6.	Presentation of work Plan / Action Plan and identification of Project	16
7.	Report writing / Documentation of work done	20
	<b>Total</b>	<b>100</b>

**Legends:** R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

**Note:** This specification table provides general guidelines to assist students for their learning and to teachers to teach and question paper designers/setters to formulate test items/questions to assess the attainment of the UOs. The actual distribution of marks at different taxonomy levels (of R, U and A) in the question paper may slightly vary from above table.

## 10. SUGGESTED STUDENT ACTIVITIES

Other than the classroom and laboratory learning, following are the suggested student-related **co-curricular** activities which can be undertaken to accelerate the attainment of the various outcomes in this course: Students should perform following activities in group and prepare reports of about 5 pages for each activity. They should also collect/record physical evidences for their (student's) portfolio which may be useful for their placement interviews:

- Conduct a market survey/research/ study on current trends in designing.
- Undertake a survey on societal needs.
- Visit a brand Shop/industry to understand the core concept of designing.

## 11. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- Guide student(s) to take micro-projects.
- Blend the basic concepts with more specialized instruction
- Visualization, Cooperative Learning, inquiry based instruction, differentiation, effective use of technology, think-pair and share etc pedagogies can be implemented as per the enlisted course outcomes.

- e) Give at least 10 competitive problems for each course outcomes of this course
- f) Practice, practice and practice - expose students to wide range of problems
- g) About **20% of the topics/sub-topics** which are relatively simpler or descriptive in nature is to be given to the students for **self-learning**, but to be assessed using different assessment methods.
- h) With respect to **section No.10**, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.
- i) Guide students on how to address issues on environment and sustainability using the knowledge of this course

## 12. SUGGESTED MICRO-PROJECTS

**Not applicable**

## 13. SUGGESTED LEARNING RESOURCES

S. No.	Title of Book	Author	Publication with place, year and ISBN
1	Research Methodology (Methods and Techniques)	C. R. Kothari	New Age International Publishers, New Delhi, 2016 ISBN: 978-81-224-1522-3
2	Research Methodology	Dipak Kumar Bhattacharyya	Excel Books, 2003 ISBN: 8174463410, 9788174463418

## 14. SUGGESTED LEARNING WEBSITES

- a) <https://archive.nptel.ac.in/courses/110/104/110104073/>
- b) <https://textilelearner.net/fashion-show-types/>
- c) <https://shodhganga.inflibnet.ac.in/>
- d) <http://www.pmms.gtu.ac.in/Layouts/ProjectSearch>
- e) [https://s3-ap-southeast-1.amazonaws.com/gtusitecirculares/circulars/12Aug/13082012\\_03.pdf](https://s3-ap-southeast-1.amazonaws.com/gtusitecirculares/circulars/12Aug/13082012_03.pdf)
- f) [https://s3-ap-southeast-1.amazonaws.com/gtusitecirculares/uploads/Internship\\_\\_Project\\_Report\\_Guidelines\\_\\_3180701\\_\\_661242.pdf](https://s3-ap-southeast-1.amazonaws.com/gtusitecirculares/uploads/Internship__Project_Report_Guidelines__3180701__661242.pdf)

## 15. PO-COMPETENCY-CO MAPPING

Semester 6th	Fashion studies & Merchandising (Course Code:4365904 )						
	POs						
Competency & Course Outcomes	PO 1 Basic & Discipline specific knowledge	PO 2 Problem Analysis	PO 3 Design/development of solutions	PO 4 Engineering Tools, Experimentation & Testing	PO 5 Engineering practices for society, sustainability & environment	PO 6 Project Management	PO 7 Life-long learning
<b>The Integrated Designing will encompass a strong integrated skill and knowledge base essential to the Fashion &amp; Textile industries.</b>							
<b>Course Outcomes</b>							
CO a)	3	3	3	1	1	3	3
CO b)	3	3	3	1	1	3	3
CO c)	3	3	2	2	2	3	3
CO d)	3	3	3	2	2	3	3

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

## 16. COURSE CURRICULUM DEVELOPMENT COMMITTEE

### GTU Resource Persons

Sr. No.	Name and Designation	Institute	Contact No.	Email
1.	Mr. P.P. Rana, Lecturer	GPG Surat	8460371987	pprana.81@gmail.com
2.	Mr. S B Goswami, Lecturer	GPG Surat	9377568889	goswami.shailesh@gmail.com