

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021)

Semester - I

Course Title: Basic Design and Colour

(Course Code: 4315901)

Diploma programme in which this course is offered	Semester in which offered
Textile Design	First

1. RATIONALE

This subject provides knowledge regarding elements of art, principles of design, colour theory and application of colour, compositional techniques along with design creation by Rendering techniques, creating textures and patterns. This is basic requirement of any textile designer.

2. COMPETENCY

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

- **Create designs using knowledge of Compositional techniques, colour theory, colour mixing and its application.**

3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge and the relevant soft skills associated with the identified competency are to be developed in the student for the achievement of the following COs:

- a) Create basic designs using relevant compositional techniques.
- b) Use primary, secondary and tertiary colour in textile designing.
- c) Create designs using principles of line, space, form, colour and texture.
- d) **Create designs using colour theory, colour mixing, colour schemes and colour combination keeping environmental considerations in production.**

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	CA	ESE	CA	ESE	
0	0	4	2	0	0	50*	50	100

(): For this practical only course, 50 marks under the practical CA has two components i.e. the assessment of micro-project, which will be done out of 25 marks and the remaining 25 marks are for the assessment of practical. This is designed to facilitate attainment of COs holistically, as there is no theory ESE. However this course should be considered as an applied theory course where the theory portion is taught during the practical/studio hours.*

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)	Approx. Hrs. required
1	Create patterns using 'line' as the element of art for design creation.	04
2	Create various 2-dimensional shapes using different elements of art for design creation.	04
3	Create various 3-dimensional shapes using different elements of art for design creation.	04
4	Draw a design creating optical illusion using monochromatic colour.	04
5	Create various types of textures using different elements of art for design creation using monochromatic colour.	04
6	Create various types of textures using different elements of art for design creation using vivid colours.	
7	Draw colour wheel representing the colour theory	04
8	Use primary colours to show its significance and application in design creation.	04
9	Use secondary colours to show its significance and application in design creation.	04
10	Use tertiary colours to show its significance and application in design creation.	04
11	Draw colour wheel representing the complementary colours, warm and cool colour	04
12	Use different colour schemes and combination to show its significance and application in daily life	04
13	Create designs using compositional techniques like rule of thirds, rule of odds, rule of space	04
14	Create some motifs using compositional techniques and colour schemes.	04
Total		56

Note

*i. More **Practical Exercises** can be designed and offered by the respective course teacher to develop the industry relevant skills/outcomes to match the COs. The above table is only a suggestive list.*

*ii. The following are some **sample** 'Process' and 'Product' related skills (more may be added/deleted depending on the course) that occur in the above listed **Practical Exercises** of this course, which are embedded in the COs and ultimately the competency.*

S. No.	Sample Performance Indicators for the PrOs	Weightage in %
1	Use of basic elements of art for design creation	20

2	Use of basic principles of art for design creation	20
3	Use of relevant compositional techniques for design creation	30
4	Use of colour theory, colour mixing, colour schemes and colour combination	30
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

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

S. No.	Equipment Name with Broad Specifications	PrO. No.
1	Basic stationary material Pencil, scale, eraser, etc.	All
2	Different colour media like water colour, poster colour, acrylic colour, etc	All
3	A3 size paper sheet	All

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 fulfil the development of this course competency.

- a) Work as a designer/team member of design studio.
- b) Evaluation for design forecasting

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:

- i. 'Valuing Level' in 1st year
- ii. 'Organization Level' in 2nd year.
- iii. 'Characterization Level' in 3rd 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
Unit – I Elements of Art and Fashion Design	1a. Select/ draw/Identify different types of lines according to use. 1b. Identify direction and shape. 1c. Select size and texture for	1.1 Line – concept, definition, types of line. 1.2 Direction – types. 1.3 Shape – definition, types. 1.4 Size – concept, types. 1.5 Texture – concept and application.

Unit	Unit Outcomes (UOs) (4 to 6 UOs at different levels)	Topics and Sub-topics
	<p>developing designs.</p> <p>1d. Experiment with different values and colour.</p> <p>1e. Compare different types of designs and designers.</p>	<p>1.6 Value – concept, use.</p> <p>1.7 Colour – definition, sensation process and use.</p> <p>1.8 Form – concept, use.</p> <p>1.9 Concept and definition of design.</p> <p>1.10 Designer types – industrial, graphic, textile and fashion.</p>
Unit– II Principles of Design	<p>2a. Use of principles of design to create new designs.</p> <p>2b. Differentiate between the structural and decorative design.</p> <p>2c. Compare the concepts of style, fad and trend.</p>	<p>2.1 Repetition – technical concept</p> <p>2.2 Alternation – size, direction, colour, shape, permutation, combination.</p> <p>2.3 Harmony – pure and discord.</p> <p>2.4 Gradation – shape, size and colour.</p> <p>2.5 Contrast – colour and value.</p> <p>2.6 Unity – concept development.</p> <p>2.7 Balance – formal and informal balance.</p> <p>2.8 Dominance and sub-ordination – concept and application.</p> <p>2.9 Structural design and Decorative design.</p> <p>2.10 Concepts of style, fad and trend.</p>
Unit– III Colour Theories And Harmonies	<p>3a. Differentiate between the light theory and pigment theory.</p> <p>3b. Modify the colours as per need of the design.</p> <p>3c. Develop the design with various colour harmonies.</p> <p>3d. Judge the effect of textile substrate.</p>	<p>3.1 Light theory of colour – chromatic circle, colour vision</p> <p>3.2 Pigment theory of colour – colour wheel, attributes of primary and secondary colours.</p> <p>3.3 Colour modification – concept, need and requirements.</p> <p>3.4 Colour harmony – achromatic, monochromatic, analogues, complementary, polychromatic.</p> <p>3.5 Effect of textile substrate on appearance of colour.</p>

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						

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

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:

- a) Create a design using monochromatic colour for geometric and freehand shapes on 15cm*15cm area of the paper sheet.
- b) Create a design representing optical illusion on 15cm*15cm area of the paper sheet.

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:

- a) Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- b) Guide student(s) in undertaking micro-projects.
- c) '**L**' in **section No. 4** means different types of teaching methods that are to be employed by teachers to develop the outcomes.
- d) 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.
- e) With respect to **section No.10**, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.

12. SUGGESTED MICRO-PROJECTS

Only one micro-project is planned to be undertaken by a student that needs to be assigned to him/her in the beginning of the semester. In the first four semesters, the micro-project are group-based (group of 3 to 5). However, **in the fifth and sixth semesters**, the number of students in the group should **not exceed three**.

The micro-project could be industry application based, internet-based, workshop-based, laboratory-based or field-based. Each micro-project should encompass two or more COs which are in fact, an integration of PrOs, UOs and ADOs. Each student will have to maintain dated work diary consisting of individual contribution in the project work and give a seminar presentation of it before submission. The duration of the microproject should be about **14-16 (fourteen to sixteen) student engagement hours** during the course. The students ought to submit micro-project by the end of the semester to develop the industry-oriented COs.

A suggestive list of micro-projects is given here. This has to match the competency and the COs. Similar micro-projects could be added by the concerned course teacher:

- a) Create a design using three or more as motif to be used for textiles getting inspiration from Observing the natural objects around you.

- b) Create a design using three or more as motif to be used for textiles getting inspiration from the manmade objects around you and.

13. SUGGESTED LEARNING RESOURCES

S. No.	Title of Book	Author	Publication with place, year and ISBN
1	Color Harmony-2	Bride M. Whelan	Rockport Publishers,USA,1994, ISBN-1-56496-066-8
2	World Textiles Collections-1 Basic Flower	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1991, ISBN-4-7636-8091-9
3	World Textiles Collections-3 Ethnical Asia	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8100-1
4	World Textiles Collections-5 Sports Mix	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8101-X
5	World Textiles Collections-6 Abstract Pattern	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8098-6
6	World Textiles Collections-7 Antique Flower	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan,, 1992, ISBN-4-7636-8102-8
7	World Textiles Collections-9 Ethnical U.S.A	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8103-6
8	World Textiles Collections-10 Tropical Casual	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8104-4
9	World Textiles Collections-11 Casual Geometric	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8099-4
10	World Textiles Collections-12 European Studio Part-2	Kyote, Shoin	Kyoto Shoin International Co.Ltd., Japan, 1992, ISBN-4-7636-8105-2
11	Patterns In Fashion	Macarena San Martin	Paco Asensio, Printed In Spain,2009, ISBN-9783836511698
12	New Fashion Print	Martin Dawber	Batsford, London, 2008, ISBN-9781906388072

14. SOFTWARE/LEARNING WEBSITES

- <https://textile-ideas.blogspot.com/2013/08/color-wheel.html>

- <https://erickimphotography.com/blog/2017/11/06/color-theory-for-photographers/>
- <https://www.colormatters.com/color-and-design/basic-color-theory>
- <https://www.smashingmagazine.com/2010/01/color-theory-for-designers-part-1-the-meaning-of-color/>
- <https://99designs.co.uk/blog/tips/the-7-step-guide-to-understanding-color-theory/>
- https://en.m.wikipedia.org/wiki/Visual_design_elements_and_principles
- <https://www.pinterest.co.uk/pin/553661347926130481/>
- <https://stock.adobe.com/in/images/type-of-lines-in-art/200339857>
- <http://artonlinechampion.weebly.com/project-2-50-line-types.html>
- <https://designshack.net/articles/inspiration/best-line-patterns-textures/>
- <https://createartwithme.com/4-main-concepts-to-teach-art-composition/>
- <https://www.youtube.com/c/thevirtualinstructor/videos>
- https://www.youtube.com/results?search_query=COMPOSITIONAL+TECHNIQUE+BASICS+FOR+DRAWING
- https://youtu.be/AeHqLfJBtC?list=TLPQMTUwOTlwMjHZ_ir7IK8_aw
- https://www.youtube.com/watch?v=AeHqLfJBtC&list=RDCMUCULpiAa8nll_e68y59VYjHQ&start_radio=1&rv=AeHqLfJBtC&t=56

15. PO-COMPETENCY-CO MAPPING

Semester I	Basic Design and Colour (Course Code: : 4315901)						
	POs and PSOs						
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
Competency	Create designs using knowledge of Compositional techniques, colour theory, colour mixing and its application						
Course Outcomes							
CO a) Create basic designs using relevant compositional techniques.	3	1	2	2	1	1	3
CO b) Use primary, secondary and tertiary colour in textile designing.	3	1	2	2	2	1	3
CO c) Create designs using principles of line, space, form, colour and texture.	3	2	2	2	1	1	3
CO d) Create designs using colour theory, colour mixing, colour schemes and colour combination keeping environmental considerations in production	3	2	2	2	1	1	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**

S. No.	Name and Designation	Institute	Contact No.	Email
1	Mrs. Unnati U. Kothari	Government Polytechnic for Girls, Surat	9898201435	ggpshod.txt@gmail.com
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NITTR Resource Persons

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2	Prof. Chanchal Mehra, Associate Professor	Media Research & Development Education	8109585310	cmehra@nittrbpl.ac.in